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ABSTRACT

Testimony presented at this hearing focuses on ways in which television can have a positive impact on children's education, what is known about the impacts of television programming on children, and what Congress can do to promote television's positive educational values. Witnesses include the following: John D. Abel, senior vice president, research and planning, National Association of Broadcasters; Grace Baisinger, National Parent Teacher Association; William F. Baker, president, Television Group W, Westinghouse Broadcasting and Cable, Inc.; Edwin Cohen, executive director, Agency for Instructional Television, and chairman of the board, Joint Council on Educational Telecommunications; Gerald Lesser, Graduate School of Education, Harvard University; Lloyd N. Morrisett, president, John and Mary R. Markle Foundation and chairman, board of trustees, Children's Television Workshop; Edward J. Pfister, president, Corporation for Public Broadcasting; Sharon Robinson, director, instruction and professional development, National Education Association; Eli A. Rubinstein, School of Journalism, University of North Carolina; and William S. Singer, president, Prime Time School Television. Also included is material submitted for the record by the Bank Street College of Education and Reading Rainbow, and a report from the National Association of Broadcasters on the amount of children's instructional programming aired during the 1973-74 and 1977-78 television season. (LMM)

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POTENTIAL OF TELEVISION IN EDUCATING CHILDREN

ED245672

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON TELECOMMUNICATIONS, CONSUMER PROTECTION, AND FINANCE

OF THE

COMMITTEE ON ENERGY AND COMMERCE

AND THE

SUBCOMMITTEE ON ELEMENTARY, SECONDARY, AND VOCATIONAL EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR

HOUSE OF REPRESENTATIVES

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POTENTIAL OF TELEVISION IN EDUCATING CHILDREN

WEDNESDAY, OCTOBER 5, 1983

HOUSE OF REPRESENTATIVES, COMMITTEE ON ENERGY AND COMMERCE, SUBCOMMITTEE ON TELECOMMUNICATIONS, CONSUMER PROTECTION, AND FINANCE, COMMITTEE ON EDUCATION AND LABOR, SUBCOMMITTEE ON ELEMENTARY, SECONDARY AND VOCATIONAL EDUCATION,
Washington, D.C.

The subcommittees met, pursuant to notice, at 9:40 a.m., in room 2175, Rayburn House Office Building, Hon. Carl D. Perkins (chairman, Subcommittee on Elementary, Secondary and Vocational Education) and Timothy E. Wirth (chairman of the Subcommittee on Telecommunications, Consumer Protection and Finance) presiding.

Mr. PERKINS. Let us close the door there, and the committee will come to order.

This morning the Subcommittee on Elementary, Secondary and Vocational Education of the Education and Labor Committee and the Subcommittee on Telecommunications, Consumer Protection and Finance of the Energy and Commerce Committee are conducting an oversight committee on the educational potential of television. I commend Chairman Wirth and the Telecommunications Subcommittee for initiating this hearing.

Our purpose this morning is to examine the ways in which television can have a positive impact on our children's education. I believe this inquiry is especially appropriate at a time when many national reports are pointing out weaknesses in our schools. I look forward to hearing the testimony of the distinguished witnesses we have scheduled this morning.

Before we commence, I will call on Mr. Wirth at this time for a speech.

Mr. WIRTH. Thank you very much, Mr. Chairman.

I want to thank you and our colleagues on the Education Committee for the beginning of what I think is a long and potentially fruitful relationship between the two committees in our concern about the relationship of broadcasting and education.

As you pointed out, Mr. Chairman, over the last several months there have been a great variety of studies, blue ribbon commissions and others raising the issue of education and the crisis of education facing our country. Now, what is remarkable to me is that those studies do not reference what goes on outside of the four walls of the classroom. There are two other very, very broad influences.

One is the changes that are going on among our working population: Single parent families and two working parents. What implication does that have for kids? What do kids do when they come home from school?

Second, clearly, what are the impacts of television? We have over a long period of time in this country debated up one side and down the other the ramifications of education. However, we have focussed only briefly on what might be going on in the area of television. And today I think it is up to us to try again to look once more at what television can do and what the implications of television will be for our young.

Recently, the National Science Foundation concluded a study of American education and recommended that an hour a day of commercial broadcasting on television be devoted to children's programing. Today, I am introducing legislation to implement this recommendation.

If we look at the data, it is alarming how very little attention is paid to children on television. A recent study conducted by the subcommittee shows that less than 1 percent of weekly air time is devoted to educational or informational programing for television on commercial broadcasting. Twice that amount is devoted to cartoons.

We have an obligation to provide more programing to our children. I hope that my colleagues will focus on this legislation and that together we can understand how we can better educate and socialize our young—a national goal that we all feel must certainly be in the forefront of the Nation's attention again.

Chairman Perkins, I again thank you for having this hearing today, and for cosponsoring this legislation with me. I look forward to working with you and all of our other colleagues.

[Mr. Wirth's prepared statement follows:]

STATEMENT OF HON. TIMOTHY E. WIRTH

Good morning. Today the Subcommittee on Telecommunications, Consumer Protection and Finance and the Subcommittee on Elementary, Secondary and Vocational Education begin hearings on the potential of television educating our children. I would like to thank my good friend and colleague Chairman Perkins for co-hosting this important hearing on issues that have generally been treated in a mutually exclusive fashion—education and television. I am hopeful that today's hearing will begin a partnership between our two Subcommittees toward a greater and more effective utilization of telecommunications technologies for the positive educational benefit of Americans.

Over the past several months a series of blue ribbon commissions have pointed to the educational crisis facing our country. They have suggested that we are losing ground in competing with the rest of the world in an increasingly technological age. Notably, a recent report by a National Science Board commission calls broadcasting "the most pervasive medium of informal learning today" and outlines several suggestions to improve television's positive educational impact on children.

There is no question that television has an enormous impact on all Americans, but especially on our children who are young, impressionable and generally vulnerable to what they perceive as the world around them. For children, television has become so pervasive an influence that by the time the average child finishes high school he or she has spent an astonishing 10,000 to 15,000 hours in front of the television set—more time than in the classroom. Moreover, today we know that television can teach a wide variety of skills and behaviors. But what kind of skills and behaviors are we teaching? Decades of study have shown that in both laboratory and field tests, television violence leads to aggressive behavior in children and adolescents who watch the program. But what about the positive results of television?

We are now seeing the fruits of a generation of children who were weaned on "Seasame Street." Pioneered by our excellent public broadcasting system, children who regularly watched the program have ranked higher in verbal ability, intelligence, coordination and attitude toward school than children who watched infrequently, or not at all. We can see from this program and research on others that there is no question that television can significantly aid us in reversing the course of recent trends toward educational mediocrity.

For those of us involved in communications, it is no secret that the Federal Communications Commission (FCC) has long recognized the great educational potential that television promises. In fact, the FCC has been involved in issues relating to children's television programming for 20 years. In 1960, the FCC specified children as one of several groups whose programming needs must be met by television licensees. Recognizing the dearth of programming for children in 1974 the FCC issued a policy statement which concluded that under the law, broadcasters have a "special obligation to serve children" and mandated that commerical broadcasters voluntarily "make a meaningful effort" to improve the amount of programming designed for children.

With great hoopla, broadcasters set about to voluntarily increase programming for children. But, in 1979, after 5 years of effort, the FCC discovered that programming for children had increased by less than one hour per week. Because the FCC believed that this was not a meaningful effort a rulemaking was begun in 1979 to again attempt to address the special and important needs of children.

Although several FCC hearings on this issue have been held and voluminous comments have been received, the FCC has taken no further action toward making broadcast television more responsive to our nation's youth.

Throughout the development of this kidvid stalemate, I know that many of my colleagues have heard from broadcasters that they serve the public interest, and that any regulation in their area is unwarranted. But what have we gotten from voluntary efforts by this industry to increase programming for children?

In an effort to better understand what is being done today my Subcommittee sent a questionnaire to every commercial television station in the nation. Although Congressional requests usually elicit high response rates, we received responses from only 40 percent of the stations—stations that I might add are probably providing better public service programming given their openness and willingness to reply to the Subcommittee.

Last night I received the first computerized data from our survey. Results on children's programming show that this nation's commercial broadcasters devote only 61 minutes a week to educational programming for children, or ¾ of one percent of their daily air time, while cartoons make up 152 minutes of children's programming. Including all other programming, such as game shows, according to the broadcast industries' own responses, stations on average air a grand total of only 4½ hours per week for our children. That, sadly enough translates into only about 3 percent of total air time being devoted to our children.

Frankly, I am amazed at, and deeply disappointed by these statistics. And I am sure that our figures are vastly understated when it comes to cartoon programming, since a glance at any TV Guide will show that on Saturday morning alone there is more cartoon programming than stations have listed as their totals.

Moreover, which stations would you think air these shows? The wealthier major network affiliates or the independent stations? Our data shows that, surprisingly, independent stations air twice as many minutes of children's programming each week as the network affiliates.

For over a decade we have tried voluntary programs. We have asked the broadcast licensees nicely to increase their children's programming because it's in the public interest, it furthers education and it is good for the country. And what has been the response? Basically nothing.

So, today I would like to do something about this serious lack of broadcaster responsiveness. Today I am introducing the "Children's Television Education Act of 1983" which adopts the forthright suggestion of the National Science Board and requires every television broadcast station to air a minimum of one hour per day of programming specifically designed to enhance the education of our nation's children. Because television's educational potential is tremendous, yet largely unrealized, I am hoping that this modest proposal will be a first step toward providing the impetus for increased and meaningful programming designed for children. Television cannot be a substitute for our teachers and our schools but it can certainly enhance a child's learning experience.

I am looking forward to hearing from our most distinguished expert witnesses today on what we know about television, and what the Congress can do to promote

its positive educational values. Our witnesses include Dr. Sharon Robinson from the NEA, Grace Baisinger, past president of the National PTA; Lloyd Morrisett, representing the Children's Television Workshop and the Markle Foundation; Gerald Lesser, Dr. Eli Rubenstein, Dr. Edwin Cohen, from the Agency for Instructional Television; Dr. William Baker, President Television for Group W Broadcasting; Dr. John Abel from the National Association of Broadcasters; and Bill Singer, representing Prime Time School Television.

I welcome all of you and thank you for sharing your expertise with us on this important issue.

Mr. PERKINS. Panel 1 is Dr. Sharon Robinson——

Mr. BIAGGI. Mr. Chairman.

Mr. PERKINS. Excuse me, Mr. Biaggi. Go ahead, Mr. Biaggi.

Mr. BIAGGI. Thank you, Mr. Chairman.

I would like to commend my colleague, Mr. Wirth, for his initiative in this undertaking. I think it is critical. It is one that deserves an undertaking and I hope it brings forth some productive legislation.

We have an abundance of research that points to the impact of television upon children. In my mind what we have not focused upon is the impact of negative stereotyping in television programing upon children, and I am anxious to hear from the witnesses to see how television can reinforce negative stereotypes as well as create new ones.

As the author of legislation that would create a bureau within the Federal Communications Commission to monitor negative ethnic stereotyping in television, I would hope we could look at some of those issues today. Right now, concerned parents and educators have really little recourse available to them other than to allow their children to view negative stereotypes. I would hope we could improve the track record of the broadcast industry in this area.

I look forward to the testimony and hope that it will be useful to us toward this end.

With relation to the 1 hour Chairman Wirth makes reference to, in addition to the quantity, I would certainly hope that the television broadcasting industry would deal with quality as well, because there is no question that the power of television is awesome. If you couple that with the presence of teachers, the process of learning is magnified some tenfold by television.

In this area, Mr. Chairman, it is one that we should be looking at, especially when you consider the crisis in education—especially when enunciated by the President of the United States. This could be a very substantial instrument for remedying that condition.

Thank you, Mr. Chairman.

Mr. PERKINS. Does anyone else care to make an opening statement?

[No response.]

Mr. PERKINS. The first panel consists of Dr. Sharon Robinson—come around and take your seats at the table—director of instructional and professional development, National Education Association; Ms. Grace Baisinger, past president, National Parent-Teachers Association; Mr. Lloyd Morrisett, chairman of the board, Children's Television Workshop; Dr. Eli Rubinstein, Bush Institute for Child and Family Policy, University of North Carolina; and Mr. John Abel,

senior vice president for research, National Association of Broadcasters.

And Mr. William Singer, you come around. I understand that you must—you have to leave in order to catch a plane early.

Mr. SINGER. Thank you, Mr. Chairman.

Mr. PERKINS. What time does your plane leave?

Mr. SINGER. 12 o'clock.

Mr. PERKINS. We will hear from you first, then. Go ahead, this morning.

STATEMENTS OF WILLIAM S. SINGER, PRESIDENT, PRIME TIME SCHOOL TELEVISION; SHARON ROBINSON, DIRECTOR, INSTRUCTION AND PROFESSIONAL DEVELOPMENT, NATIONAL EDUCATION ASSOCIATION; GRACE BAISINGER, ON BEHALF OF NATIONAL PTA; LLOYD N. MORRISETT, PRESIDENT, JOHN & MARY R. MARKLE FOUNDATION AND CHAIRMAN, BOARD OF TRUSTEES, CHILDREN'S TELEVISION WORKSHOP; ELI A. RUBINSTEIN, ADJUNCT RESEARCH PROFESSOR IN MASS COMMUNICATIONS, SCHOOL OF JOURNALISM, UNIVERSITY OF NORTH CAROLINA; AND JOHN D. ABEL, SENIOR VICE PRESIDENT, RESEARCH AND PLANNING, NATIONAL ASSOCIATION OF BROADCASTERS

Mr. SINGER. Thank you, Mr. Chairman, Subcommittee Chairman Wirth as well. I appreciate the opportunity to testify today.

I am the president of an organization entitled Prime Time School Television, which is a national nonprofit educational organization that produces and distributes print materials designed to maximize the educational potential of television programing. From 1975 to 1980 I served as its president and executive director. Although I have returned to the practice of law, I remain its president.

We distribute and prepare two types of materials: Program guides for use with television programs and curriculum projects which link all types of programing—news, drama, situation comedies, and even commercials—to the study of certain areas, such as economics, aging, foreign affairs, and political events such as the election of the President and the Congress every 4 years.

In that light, Mr. Biaggi, I would like to note that one of the recent productions we have made is a guide called "Thinking About Aging," and the whole purpose of it is designed to deal with stereotypical performances on television about older people in America, and I think copies are available for you and your staff.

We have done the same thing about other minority groups as well in dealing with particular programs on sterectypes and how television can reinforce negative stereotypes unless there are materials of instruction and unless parents and teachers are aware of those facts and deal with them constructively.

Television by itself has the potential for good or evil, and the question is how do we maximize the positive potential? That is the purpose of our organization.

Our materials are funded by corporate sponsors, underwriters of programs, networks, cable companies, Government, and private foundations. The average distribution of each of our materials or

projects is 150,000 copies, including the 10,000 teacher members of Prime Time School Television.

Our guides are mailed in advance of broadcasts, alerting parents and teachers so they can be alert for home viewing. Each guide contains discussion questions, research, and writing projects, and readings related to the program.

Obviously, we are a believer in one of the basic premises underlying these hearings, namely that television has a positive educational potential. Maximizing that potential is our reason for existence, as well as your area of inquiry.

How can it best be accomplished? First, the program offerings are key. Regularly scheduled programs specifically designed for different age groups are a tremendous help. The ABC afterschool specials, the CBS Young Peoples series, are but two examples. Unfortunately, we need much more of this type of programing designed specifically and allocated on times specifically to coincide either with prime time viewing hours or children's viewing hours.

Second, the commitment to promote and generate interest in the programs is essential. I am not talking here of specifically just funding work of ours. I really mean onair promotion and regular advertising of these programs designed to hit these markets. The CBS-Library of Congress joint venture is a good example of this kind of commitment, but we need much more.

The third is timing. Major programs must be offered in prime time. There are many that can be used educationally. Examples are "Roots," "Eleanor and Franklin," many of the PBS offerings obviously, "Masterpiece Theatre," "Great Performances."

But again, these are too few and their time is essentially offered for mass market and not necessarily for an educational appeal. Nevertheless, these programs do have an educational appeal.

We have conducted workshops and attended hundreds of community and teacher meetings. One message is clear in all of them: TV is reality for young people. They watch it, they believe it, and it defines much of their world. There is tremendous opportunity to use this vehicle for positive ends and that is why we exist.

We have no illusions about our impact on any grand scale. Yet it is exactly the combination of programing, timing, promotion, and a commitment to reach the educational potential that these programs have that makes our work exciting and I think the commission you have today equally exciting.

Every time we measure teacher and parent reaction to programing which has been educationally promoted, we are astounded at the high rate of viewing and the positive response from educators. We regularly survey teachers and parents to how they responded and reacted—react to the kind of materials we distributed and the kind of programs that we promote through these materials.

Their response is overwhelming. I have no doubt that teachers and parents want to use television as a positive educational vehicle.

And in summary, therefore, just to limit my time to 5 minutes, what they need is the programing, the timing of the programing, and the commitment to promote the programing. And I do not mean just educational. I mean onair and through all advertising media. Those three ingredients, and I would stress those three—

programing, timing, that is, aired programing, and timing—are the ingredients, I believe are the keys to success.

Thank you, Mr. Chairman.

Mr. PERKINS. Thank you very much, and we will get back to you when we hear from the rest of the panel.

Dr. Sharon Robinson, we will hear from you at this time.

STATEMENT OF SHARON ROBINSON

Ms. ROBINSON. Thank you, Mr. Perkins, Mr. Wirth.

Mr. PERKINS. Pull that up closer to you. I do not think people are hearing you.

Ms. ROBINSON. I am Sharon Robinson. I direct the Instructional and Professional Development Program of the National Education Association.

We would like to commend both subcommittees for joining their interests and resources in looking at this important issue. We have been somewhat astounded by the lack of attention given to the external forces within our community as we look at the state of education through a number of commission reports and task force reports.

The obvious reality of television as a very present force within the lives of children cannot be overlooked. We have been longstanding advocates for more and greater quality in children's television programing for a number of years and, Mr. Wirth, we have appeared before your subcommittee previously on this matter.

Another coincidental event is the recognition of the second annual awards of the National Education Association for outstanding programing in television and radio. While this was an occasion of some celebration for us, an opportunity to recognize and congratulate some specific programing, we do not take it to mean that we have reached our goal in terms of the quantity of programing worthy of such recognition.

The standards used in making the selections would, I think, be of interest to the committee. The selection panel was interested in programing that utilized various motivational techniques that captured the interest of students, programing that was adaptable to or compatible with classroom instruction, programing that reflected fairness, accuracy, and lack of bias, programing that had cultural, social, political, or technical significance; further, programing which demonstrated high artistic and technical standards and which encouraged intelligent, thoughtful viewing.

I am sorry to say that such programing is not found in abundance. In light of our effort to identify such programing and of the recent reports, I would call your attention specifically to the National Science Board Commission on Precollege Education in Mathematics, Science, and Technology report entitled, "Educating Americans for the Twenty-First Century." Now, this report speaks specifically to math and science instruction, and the authors of the report clearly see television as a basic and important way to supplement the learning of children. They say:

> Perhaps the most pervasive medium of informal learning today is through broadcasting. Even young children watch almost four hours of television daily. Indeed, in an increasing number of homes both parents work and children return home each

afternoon and are exposed to commercial television programs which often present a grossly distorted, and generally negative, picture of science.

The report goes on to recommend, Mr. Wirth, at least 1 hour of television programing daily aimed at math and science education.

We would use this recommendation to build upon the concept embodied in the Children's Television Education Act of 1983 and suggest that 1 hour of programing daily include a broad spectrum of the curriculum, not just math and science, and that certain standards for that programing be established and enforced so that issues of equity, lack of bias, and a standard of technical and artistic quality would be required.

I would remind you that we have urged the establishment of a temporary commission on children's television programing. We think through this commission we might advise the industry on some creative and diverse ways of designing and presenting programing for children.

I would also like to add at this point that one of the major problems the industry will often cite is the lack of an audience. Now, as we have already heard, this audience is going to have to be established, and certainly if the program is never there, if the scheduling of the programing is unreliable, that audience will not be established and certainly will not become commercially viable.

We believe that the commercial interest of the industry, as well as all of our educational interests for our young people, can be enhanced through the requirement of regular programing specifically designed for children.

Thank you. I look forward to your questions and answers.

[Testimony resumes on p. 21.]

[The prepared statement of Ms. Robinson follows:]

TESTIMONY PRESENTED BY

THE NATIONAL EDUCATION ASSOCIATION

Mr. Chairmen and Members of the Subcommittees:

My name is Sharon Robinson, and I am director of Instruction and Professional Development for the 1.7 million member National Education Association (NEA) which represents teachers and other school employees across the nation. We thank you for this opportunity to present our views on as vital a topic as children's television programming.

At the onset of my statement, I would like to tell you how pleased we are to be present on the occasion of these joint hearings of the Subcommittees on Elementary, Secondary, and Vocational Education, and on Telecommunications, Consumer Protection, and Finance. In our view, the coming together of these Subcommittees which generally work in separate arenas is an important sign of the times. I hope that your interaction today will lead to a longstanding partnership that will lead to positive national results in the utilization of broadcasting as a serious educational tool.

Clearly, as the nation is focusing on the pursuit of excellence in education for all youngsters, we must also explore the ramifications of all the means of education available to us. In short, given the pervasive nature of both television and radio broadcasting, it is myopic for us to soft-pedal their educational implications.

Yet, of the numerous reports published this year by stellar commissions on the state of education in our nation, few mentioned such influences outside the classroom. With preschool and elementary school children watching up to 25-30 hours of television a week, it is in our view imperative that this medium be judged as part of the educational process -- for better or worse. Let's keep in mind that for some

children, especially those latch-key kids coming home in the afternoon to an empty house, television offers the prime out-of-school education.

One report on the future of education, released last month by the National Science Board Commission on Precollege Education in Mathematics, Science and Technology, "Educating Americans for the 21st Century," calls for a closer tie between education and broadcasting efforts in public and private realms alike. The authors of this report clearly see television as a basic and important way to supplement the learning of children. They say:

> "Perhaps the most pervasive medium of informal learning today is through broadcasting; even young children watch almost four hours of television daily. Indeed, in an increasing number of homes both parents work and children return home each afternoon and are exposed to commercial television programs which often present a grossly distorted, and generally negative, picture of science."

Within this context, then, we are particularly pleased to be here to speak on the direction of children's programming and the proposed Children's Television Education Act of 1983. We at NEA feel that this bill would go a long way in assuring our nation's young people fair programming time and quality in the world of daily television.

Your efforts in introducing this bill, Mr. Wirth, and in cosponsoring these hearings with Mr. Perkins are of particular value given the regulatory climate within the Federal Communications Commission (FCC) under this current Administration. As you well know, FCC, which has the charge of upholding and protecting the public interest clause of the Communications Act of 1934, has, to say the least, been negligent in carrying out this role in recent years. But when it comes to the FCC's responsibility for enforcing the regulations

governing children's broadcasting, their actions are nothing short of shameful.

The current chairman of the FCC, Mark Fowler, has refused to enforce the current regulations, dating from 1974, governing children's television programming. In fact, this chairman has consistently stated that children's broadcasting should be governed by "free market" principles.

At the same time that Mr. Fowler is opposing regulations governing children's television programming, he is also touting a line that the responsibility for such programming should lie entirely with the public broadcasting system. This is hardly consistent given the Administration that Mr. Fowler is representing.

Since its inception, the Reagan Administration has proposed nothing but cutbacks for public broadcasting. The Administration attempted to slash Corporation for Public Broadcasting (CPB) funding by nearly 40 percent from FY '82 to FY '83 (from an actual expenditure of $172 million in FY '82 to a proposed $102 million for FY '83. In its FY '84 budget, the Administration requested $130 million for the CPB.) Although Congressional intervention has prevented complete decimation of CPB, the toll on public broadcasting has been heavy.

All Broadcasters Have a Responsibility to Children

It is indeed an undisputed fact that public broadcasting has brought our nation's young some of the most sophisticated and successful television programming with an educational bent, such as Sesame Street, the Electric Company, and others. Yet, we must not expect this sector of our broadcasting industry to carry the entire responsibility for such a farreaching and vital task. We must also remember that roughly five

percent of our population cannot yet receive over-the-air public television signals.

But, even more importantly, since passage of the Communications Act of 1934, private broadcasters have had a legal obligation to operate in the public interest. And since promulgation of the 1974 regulations requiring broadcasters to present relevant programming for children, guidelines have been in place for their attention to the needs of this special audience. For us as a nation to now let private broadcasters "off the hook" with regard to this responsibility to present appropriate and quality children's programming is wrong.

It is for this reason and others that we appreciate the opportunity to once again appear as an advocate for more and better children's programming on network, public, and cable television. As you know, Mr. Wirth, we came before your Subcommittee earlier this year to speak on this vital issue, and we have appeared before meetings of the FCC on this same topic numerous times. We feel it is a great step forward that broadcasting issues are now also being legislatively considered within the purview of education issues. We can assure you that we will continue to press for guaranteed commitments from broadcasters for quality programming for our nation's young, and for enforcement of regulations governing this programming by the FCC.

NEA Education Awards Reward the Best

The timing of our appearance here today is relevant. Less than one week has passed since the NEA granted its second annual National Education Awards for radio series and television productions which advanced learning through broadcasting. (I have attached as an appendix to this statement a copy of the NEA press release announcing these

awards.) I would also add that the granting of these awards has been accompanied by a growing involvement in the past several years by NEA members in broadcasting. I am pleased to report that NEA members are acting as consultants to the broadcasting industry, as leaders within community service media projects, and as an important element in the development of educational uses of cable television.

I would also make mention that the National Education Awards were granted to broadcasters in the public and private sectors alike, and as such, are symbolic of our belief in the potential of television programming in both arenas as a plus for the educational process. We intend to fully encourage such endeavors in the future.

Public and Private Efforts Necessary

We know that children regularly spend nearly as much time in front of a television screen as they do in the classroom, and we know that the kind of programming they watch is often of dubious educational quality. Given these factors, it is imperative that standards governing children's programming not only be enforced, but they must also be strengthened. It is the only hope for our children to be offered alternatives to their current viewing possibilities - which often feature violence and reinforce a sense of instant gratification which does nothing to promote longterm educational gains.

I return for a moment to the above-cited report by the National Science Board Commission which clearly makes the point for the need to improve both public and private broadcasting efforts aimed at children. The report focused primarily on math and science needs and therefore, on the presentation of these subject areas by broadcasters. The report stated that while commercial television programming often

portrayed science in a "distorted" way, "a few efforts to convey the facts and excitement of science by this media (sic)...have been successful". The report also said that most of the very best of these media efforts in science programming for the young "are basically dependent upon Federal funding for their existence." The importance of this aspect of children's television programming cannot be overlooked. The Commission also made other essential recommendations.

* Science broadcasts are an important and cost-effective vehicle of informal learning and should continue to receive substantial Federal investment and support.

* Businesses, private foundations and others should increase their support for such programs in the commercial, as well as the public, broadcasting areas. They should particularly encourage programming of such material by local stations and promote appropriate education objectives for this programming.

* Federal regulation of commercial stations should include, at a time convenient from the point-of-view of the student, a required period of educational programming for children. (Elsewhere in the Commission's report, it is recommended that commercial stations should provide one hour each afternoon for children's educational programs.)

We at NEA believe that such recommendations should be in place for all academic subject areas. If broadcasters would commit themselves to presenting coverage of broad academic subject areas, we would be well on our way to boosting educational skill levels for many of our nation's youth.

Children's Television Education Act: Its Time Is Now

It is within the context of improving the educational scope of television broadcasting that we turn to the proposed "Children's Television Education Act." NEA agrees wholeheartedly with the goals of

the bill that call for utilizing the potential of television for the positive educational beneift of our children; encouraging the development of educational programming for children; and increasing the amount of educational programming broadcasted designed specifically for children. In particular, we feel that the section of the bill calling for "a minimum of one hour per day of programming specifically designed to enhance the education of children" is imperative to the strength of this proposed legislation.

For some years now, NEA has been speaking out on the need for commercial broadcasters to offer a minimum of one hour a day of programming geared specifically to the youth audience. In this call, we have been joined by many other organizations concerned with the quantity and quality of children's television. It seems to us that this hour a day is the rock-bottom amount of time that should be devoted to children's programming. Yet, even this seems too much of a task for broadcasters.

Temporary Commission: Boost to Broadcasters' Efforts

Broadcasters have often complained that they find it too difficult to come up with creative ideas for presenting ongoing, age-specific, yet diversified programming for children that educates and informs at the same time. To help them overcome this problem, NEA recommends that we create a Temporary Commission on Children's Television--an idea that we presented earlier this year before your Subcommittee, Mr. Wirth, and before the FCC.

As we have previously stated, a Temporary Commission, which we recommend be composed of educators, parents, child development specialists, creative broadcasters, writers and producers, and even

children themselves, could serve as an ad hoc, consultative body to broadcasters--to be disbanded as compliance with the law is achieved.

With the voluntary participation of Commission members from a wide variety of professional, social, and cultural backgrounds, the potential for creative advice to broadcasters is limitless.

Put Teeth in the Law

We also believe that one of the essential features needed, but currently missing from the proposed Children's Television Education Act of 1983, is a strong enforcement mechanism. According to testimony taken by the Subcommittee on Telecommunications, Consumer Protection, and Finance earlier this year, broadcasters are not now meeting the standards mandated by the FCC's 1974 Policy Statement on Children's Television. It would logically follow, then, that unless enforcement were built into this legislation, broadcasters, if they found it inconvenient, could continue to excuse themselves from complying with the law.

Again, a Temporary Commission on Children's Television could devise ways in which proper compliance with the law could be simplified for broadcasters. We believe that standards governing children's television should be reasonable and realistic, and created out of mutual need, respect, and understanding. A Temporary Commission, for example, might develop economic and promotional incentives for children's programming, as well as standards for their implementation.

Other Alternatives

We have already spoken to our belief that public broadcasting should not carry the entire responsibility for children's programming. We believe it necessary to add that neither should cable systems be

expected to take on this task in its entirety. Perhaps because of the quality programming that has regularly appeared on some cable networks, such as Nickelodeon, Showtime, and USA Cable, to name a few, some are suggesting that broadcasting needs for children are being met. We disagree. Although many NEA members are currently working to ensure the success of educational cable efforts, we must face some current realities about this broadcasting form. First of all, cable currently reaches only about a third of the nation's homes, and secondly, it costs. While cable service to communities throughout the country is expanding rapidly, it will be many years before the entire nation has access to this form of television viewing. We therefore cannot rely on it as a method for fulfilling our children's programming needs.

Conclusion

Mr. Chairmen and Members of the Subcommittees, NEA thanks you again for this chance to appear today. We stand ready to work with you to strengthen this bill and to help it become a law which will broaden and make more solid, through the use of television, the educational horizons of our nation's youth.

nea news
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FOR RELEASE AT 5:00 P.M.
SATURDAY, OCTOBER 1, 1983

One Radio, Ten TV Programs
Win National Education Awards

WASHINGTON, D.C., Oct. 1--One radio series and 10 television productions received National Education Awards today for the advancement of learning through broadcasting. The awards were granted for the second consecutive year by the 1.7 million member National Education Association. Recipients were hosted by the 150-member NEA Board of Directors at late afternoon ceremonies chaired by NEA President Mary Hatwood Futrell.

The Winners included:

Cathexis, Inc. and WGGB-TV of Longmeadow, Massachusetts for "Gary and Audrey and Us," a documentary program about a young man with cerebral palsy married to a woman without handicap.

Children's Radio Theatre of Washington, D.C. for the "Children's Radio Theatre" series of original dramatizations stimulating emotional and intellectual growth through the creative use of radio.

The Dick Clark Company of Los Angeles and ABC's "Afterschool Specials" for "The Woman Who Willed a Miracle," a dramatization for general audiences of the true story of foster parents who refused to believe the infant entrusted to their care was hopelessly retarded.

The Educational Film Center of Springfield, Virginia and U.S. Department of Education for "Powerhouse," a public television adventure series examining comprehensive concepts of mental and physical health appropriate to 8 to 12-year olds.

10/1/83

One Radio, Ten TV Programs
Win National Education Awards

Embassy Television of Los Angeles and the CBS Television Network for "Eleanor," starring Jean Stapleton, a dramatization of the life of Eleanor Roosevelt and a reminder of the human causes to which this most remarkable First Lady devoted her energies and her life.

The Canadian production team of Michael Maclear and Ian McLeod of Toronto for "Vietnam: The Ten-Thousand Day War," a 26-part series examining in depth this most controversial confrontation from 1945 to the readjustment of 2.8 million American veterans.

The Turner Broadcasting System of Atlanta, Georgia for "Portrait of America," a five-year project begun last January that will document the strengths and diversity of each of the states and territories that comprise the United States, through programming that promises profound educational and archival significance.

WAND-TV of Decatur, Illinois for "A Foot in Both Worlds," an educational series of reports for general audiences depicting the rites of passage from adolescence to adulthood.

Daniel Wilson Productions of New York for "Blood and Honor," a five-hour dramatic series produced in association with SWF and Taurus Films that focused on the Hitler youth movement and how it manipulated a generation of German youth.

WKYC-TV of Cleveland, Ohio for "Hickory House," a weekly children's series produced in consultation with teachers, featuring school-related themes. The only locally produced series within the region designed for children under the age of 12.

WNET, New York and the Public Broadcasting Service for "Tuned In," a series of ten 15-minute programs, produced in partnership with the NEA, to help equip children with the insights they need to become more alert and selective television viewers.

The National Education Award winners were selected from nominations by the media and for programs broadcast during the period from April 1, 1982 to May 1, 1983. The national selection committee represented the Association's programs in human and civil rights as well as instruction and professional development. The judging panel looked for programming that:

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One Radio, Ten TV Programs
Win National Education Awards

- utilized motivational techniques to capture interest;
- was adaptable to or compatible with classroom instruction;
- reflected fairness, accuracy, lack of bias;
- had cultural, social, political, or technical significance;
- demonstrated high artistic and technical standards;
- encouraged intelligent, thoughtful viewing.

Awards were presented in four categories:

- documentary or educationl productions for general audiences;
- documentary or educational productions for children;
- dramatic productions for general audiences;
- dramatic productions for children.

While honoring the winning broadcasters, NEA President Futrell noted the more than 50 years of critical interest demonstrated by the NEA in the constructive and creative use of radio and television. "We have recommended significant programming to our members since 1969," she noted,"knowing that with the help of parents we can influence the viewing habits of young people in a positive way."

Futrell also noted that NEA members are increasingly involved with broadcasting, many as consultants to the industry. Still other NEA members are involved as leaders in television community service projects, especially in communities served by cable television. Futrell noted that several producers of the award-winning programs had worked with teachers for more effective outreach and better community relations, a combination that for most broadcasters spells "market penetration."

Finally, in keeping with the spirit of the awards ceremonies, Futrell noted that NEA would be testifying October 5 in hearings on children's television called by the Subcommittee on Telecommunications of the House of Representatives. NEA would again offer, she said, to participate in a Temporary Commission on Children's Television, a recommendation made to the same committee last March.

Mr. PERKINS. Thank you very much.
All right, Mrs. Baisinger.

STATEMENT OF GRACE BAISINGER

Ms. BAISINGER. Thank you, Mr. Perkins.

I am Grace Baisinger, past president of the National PTA, and I am delighted to be able to testify this morning relating to the impact of television on children and families. The National PTA has long been interested in both the opportunities that television presents and the problems that arise when this powerful medium is abused.

In 1976 the National PTA instituted a television——

Mr. PERKINS. Wait just a moment. Let us pull the door together in the rear, and you talk a little louder. You pull that up closer to you.

Ms. BAISINGER. In 1976 the National PTA instituted a television commission which focused primarily on television violence. Regional meetings were held throughout the country in 1976 and 1977 to hear from the public and to collect data on personnel, TV executives, and the general public.

These hearings produced 50,000 transcript pages of testimony. Some major concerns frequently expressed were: Aggression, violence, desensitization, paranoia, affect on the quality of life, distortion of reality, and the negative effects on learning. Each of these concerns impacted on the ability of the child to perform in the classroom, as was pointed out again and again by classroom teachers.

Suggestions for resolving these concerns were addressed to the leadership in the public and government and in the television industry and to parents. From the beginning, National PTA worked with congressional committees responsible for telecommunications and with such regulatory agencies as FTC and FCC.

For example, we firmly supported the proposal to the FTC to adopt a rule requiring quantitative aids for specific programing for children and the proposed FTC rule regarding advertising directed at children.

Needless to say, we are delighted to hear that Representative Wirth has introduced or plans to introduce a bill that would require one hour a day for educational programing directed at children.

The National PTA has published materials on findings of its hearings, including the results of intensive program monitoring conducted over a period of several years. We developed critical viewing skills materials for school curricula, and we think this is most important, and we have urged our school districts to begin to teach critical viewing of testimony from grade kindergarten through grade 12, to analyze the visual images on TV the same way they learn to comprehend and understand the meaning of the printed page.

As children become more proficient thinkers about TV, they will be less influenced by it. At the same time, television, used properly, can become a fantastic medium for communicating ideas, facts and feelings.

PTA prepared materials for a curriculum for parents, because parents must learn how to become electronically literate if they are going to help their children. We train parents through a series of national workshops.

Since the PTA hearings, the problems with testimony have compounded. We underestimated at the time—that is 1977—the amount of time it was going to take before simple television broadcasting would explode into the sophisticated medium that we have today.

Back in the late 1970's we were asking the networks to give us program alternatives, as well as more and better children's programing. For example, instead of three cop car chase programs at a given hour on a particular night, we wanted more choices available for adults and children. Little did we know then what choices would be available in 1983 as a result of the technological revolution.

Certainly television has had a telling influence on children. Preschoolers watch as many as 4½ hours to 6 hours of television a day. They know all the soap opera characters, the murderers' and detectives' names, and the game show hosts from 7 a.m. to 7 p.m.

We are distressed that one very good program, "Nickelodeon" on cable television, is beginning to inject what we would call gratuitous violence in some of its very fine children's programs.

Other children up to the age of 12 watch television at midnight. Teenagers—we do not detect any effort on the part of the industry to provide adequate programming for such children. Teenagers cut school to find out what happened in any number of half or full-hour long programs in the early afternoon hours. These are the soaps.

There has been further erosion in family life. Children do not get their proper exercise because they watch so much testimony. Children use testimony to babysit themselves, especially latch key children who are afraid to venture out by themselves after school. Television has us terrified about the outside world.

Children do not communicate with their parents or their siblings. In many families the testimony is on 6½ hours a day, often while youngsters are awake. If anyone in the family dares to speak during a television show they are promptly quieted. That effectively blocks all family communication and all family education.

Parents are not eating meals with their children. They dine instead with the testimony set in front of them, rather than dine with the children. Children are often tucked away in a family room by themselves to feed on junk food. Thus these youngsters are not being taught manners, consideration of other family members, or even good dining habits, such as the proper chewing of food. All that results in ill health, including physical and emotional stress.

Children suffer from untold frights from excessive testimony violence.

A passive child, especially noticeable in U.S. classrooms, is one that is uncommunicative, uncreative, and lacks conversational skills. That is being borne out by the recent report, "A Nation at Risk," and that was certainly one of the concerns mentioned again and again by those educators who testified at our hearings.

Parents used to have more time and inclination to read to their children, play with them, and exercise with them. But more and more parents are working harder, longer hours, and saying to their children, please leave me alone, go watch television until bedtime. This sounds very familiar.

But we must remember that these parents are the first generation of parents who as children grew up with television. These parents themselves were probably addicted.

Because of the limitations of time, I will not address our concerns about cable TV, but they are in the written testimony that we are going to present to you.

In the hearings, the conclusion was that to promote testimony as a proper and constructive force in our society it must be a shared responsibility, a responsibility shared by parents and the media, the public, Government regulators, advertisers. We believe now it is time for all of us to stop talking bunk and to stop passing the buck and to get on to get the job done so that the health and welfare of our children will truly be protected.

Thank you.

[The prepared statement of Ms. Baisinger follows:]

Grace Baisinger, Past President
National PTA

I am Grace Baisinger, Past President of the National PTA and I am delighted to be able to testify this morning related to the impact of television on children and families.

Tha National PTA has long been interested in both the opportunities that television presents and the problems that arise when this powerful medium is abused.

In 1976, the National PTA instituted a Television Commission which focused primarily on television violence. Regional meetings were held throughout the country in 1976 and 1977 to hear from the public and to collect data. From the beginning, National PTA worked with Congressional Committees responsible for telecommunications, and with the FCC. The National PTA published materials on our findings including the results of intensive program monitoring conducted over a period of several years.

We developed materials for school curricula and developed viewing skills for parents to help their children - this through a series of workshops. Throughout these years - through 1982 - the National PTA also monitored, introduced, and considered legislation and rule making. We greatly underestimated the amount of time it was going to take before "simple" television broadcasting would explode into the sophisticated medium that we have today.

Back in the late 1970's we were asking the networks to give us program alternatives, as well as more and better children's programming - e.g., instead of

three cop-car-chase programs at a given hour on Sunday night, we wanted more choices available for adults and children .... Little did we know what "choices" would be available in 1983!

Certainly, television has had a telling influence on children:

a. preschoolers (under the age of 5) watch 4½ hours of television a day. They know all the soap-opera characters, murderers and detectives names and game show host from 7a.m. to 7p.m.

b. Other children (up to the age of 12) watch television at midnight, statistics show their numbers to be 1 million strong any evening of the week. What is on at that hour for young people I ask you? You know the answer, nothing.

c. Teenagers cut school to find out what happened in any number of half and full hour long programs "powers of fable" in the early afternoon hours. You guessed it, the soaps.

Further erosion has set in on family life:

a. Children do not get their proper exercise because they watch so much television after school;

b. Children use television to babysit themselves, expecially latch key children who are afraid to venture out from their homes after school. Television has them terrified about the outside world;

c. Children are not communicating with their parents, grandparents and or siblings. In many families the television is on 6½ hours a day (often while youngsters are awake) if anyone in the family dares to speak during a television show they are promptly quieted. That effectively blocks all family communication.

d. Parents are not eating meals with their own children. They dine instead with the television set in front of them rather than dine with their children. Children are often tucked away in a family room by themselves to feed on junk food, thus youngsters are not being taught manners, consideration of other family members or even good dining habits, such as the proper chewing of food. All that results in ill health, including physical and emotional stress.

e. Children suffer untold frights from excessive television violence. True murderers have tried to use the defense of "I copied my MO from a television show" and lost their case in court. However, television violence has caused excessive agressiveness in children with agressive tendencies and that is true. Children suffer nightmares every night of the week in the United States from watching scary programs. A screaming child is more usual than unusual.

f. A passive child, especially noticeable in United States classrooms, is one who is uncommunicative, uncreative, and lacks conversational skills. This is being borne out by such national reports as "A Nation at Risk".

g. Parents used to have more time and inclination to read to their children, play with them and or exercise with them, but more and more parents are working harder, longer hours and saying to their children "please, leave me alone. Go watch the television until bedtime." Sounds very familiar doesn't it!

Now lets look specifically at the cable television industry. This is a growing concern:

o First, what is the role of the Federal Government in what is definitely a local utility serving a municipality. Should the Federal Government be acting as a police person to guarantee that cable companies are responsible carriers? Why? The local municipalities can do that very well, especially if each state will oversee cable with appropriate regulations and staff to handle franchise data.

o Second, the FCC has said repeatedly it cannot monitor/control commercial television program content. This will undoubtely remain true for cable television as well.

o Third, what will become of public ascertainment for local cable channels? Most cable companies are small; offering little or no local origination, nor do local cable companies have studio equipment for programs of local origination or local interest. It is reported to take approximately 6 years to pay for the purchase of equipment needed to establish a cable station. By that time, the cable company must start all over again to up-date their technological holdings. Thus small cable companies are being gobbled up almost on a daily basis by large cable systems or mergers. But local origination and public excess channels still are unavailable and they are not mandatory, nor, will deregulation help this situation.

- Fourth, should cable subscribers have to pay for triple dipping?

  1. Cable subscribers pay for cable connection.
  2. They pay again for special programs, television courses, movies, sports, etc.
  3. The cable company collects again the third time through advertisers who force their wares on unsuspecting television viewers who are too tired after working all day to turn off the television set everytime a commercial appears (18 minutes per hour minimum).

Lets look at rating in combination with family life in cable television. There are no rating systems yet for cable programs, thus there is no input from the public as to cable viewing habits. This is both a blessing and a curse. Ratings control commercial television programming If ratings are good, the program remains, regardless of taste, quality or substance and numbers sell programs to advertisers and that is what it is all about - the bottom line. Let us never forget television is a commercial medium-one that equals "big bucks." Quality is seldom a criteria. Now that cable is turning more and more to advertisers, ratings are sure to become established because they are the only numbers that advertisers care about. So cable television probably will follow in the footsteps of commercial television: yankee dollars speaking up for yankee ad agency recommendations. Therein lies the future demise of cable's interest in children television. Children (under the age of 12) are not the money consumers in a family, so children's programming does not have to be geared to attract them. Its always the almighty dollar - ultimately that counts and children again will be great losers because of it.
Television is a marvelous stimulating, exciting teacher. Since the networks and commercial television have never made the child a major interest, it is up to parents to become more involved. Parents must know what and how much

television their children are watching. We are all familiar with the question, "would you let a stranger in off the street to take over your child and your living room?" Dr. Charles Bolz, director of University research at Louisiana Tech. University in Rushton has a great response to parents who ask if it is all right to get another TV set for their child's bedroom. - "Would you place a refrigerator stocked with junk and other foods in his or her room?" asks Bolz. And, parents must remember that excessive viewing is not good for the child even if all the programs are "wholesome" and "educational". Parents should watch questionable programs with their questioning children in order to interpret what is going on and, thus, lessen the impact. Parents, through PTA courses and other available resources, should learn how to view television appropriately in order to guide their children's experiences. Parents should understand -and accept- their role model responsibility for television viewing. Most of us understand the validity of "Do as I do" - Not "Do as I say" -except insofar as television viewing is concerned. As this committee continues its deliberation related to children's programming, deregulation, appropriation for public broadcasting, there is no question that federal - as well as state policies must be developed. Parents must be a part of determining the outcome.

Mr. PERKINS. Thank you very much.

The next witness is Mr. Lloyd Morrisett. Go ahead, Mr. Morrisett.

STATEMENT OF LLOYD N. MORRISETT

Mr. MORRISETT. Mr. Chairman and members of the subcommittees, thank you for the opportunity to appear before you. My name is Lloyd Morrisett. I am president of the John and Mary Markle Foundation and chairman of the board of Children's Television Workshop.

The Markle Foundation is a major private foundation working in the field of television and other mass communications technologies. During the last 15 years, the Markle Foundation has funded many studies on the ways in which television can affect children. The Children's Television Workshop is this country's largest producer of high-quality television programing for children that is both educational and entertaining.

I regard this joint meeting of your two subcommittees as a historic event, because in this technological age there can be no effective education policy without an effective and coordinated telecommunications policy.

Education occurs both inside and outside the classroom. This is well known. It is also well known that good schools depend on an environment which supports education, motivates learning, and rewards achievement. What is also well known, but often ignored, is that television has become a key part of that supportive environment. It is an integral and vital part of almost every American home.

The purposeful use of television to teach and motivate can be successful and cost effective. It also can have an immediate and broad impact. Whereas the recommendations to change our Nation's schools, particularly in the secondary and collegiate levels, may well take a decade to carry out, the effective use of purposeful educational television can have an immediate and broad impact within a year or less.

This is well shown by many programs, but the ones I am most familiar with, of course, are those produced by the Children's Television Workshop: "Sesame Street," "Electric Co.," and now "3-2-1 Contact."

Just to mention one set of facts about these programs, Sesame Street since its inception 14 years ago has maintained a regular audience of 9 million American children. Studies clearly show that the children who watch this program go to school better prepared in almost every area covered by the program than those children who do not watch it.

The record of accomplishment of the "Electric Co." in the area of reading is similar, and now we are finding that in the area of science education from 8- to 12-year-olds television can have the same impact.

The problem is that as a nation we have not dedicated ourselves to using broadcasting to support schoolroom learning and to create a learning society that will help us achieve the national goals that we all applaud. Again, I make the point that there can be no effec-

tive education policy in this country without an effective and coordinated telecommunications policy.

We know what television can do. It can teach skills and behaviors. It can motivate children to learn. It can simultaneously entertain and educate. If parents are involved and older siblings are involved, as some of my colleagues have already pointed out, the learning of the child in front of the television set can be multiplied 3 to 10 times over what the child would learn by himself. Television can show the world the way it is and the way it might be, the way we would all like to have it.

Finally, television, perhaps more than any other single entity and at lower cost, can help the schools accomplish their aims. I estimate that nationally we spend approximately $20 million at the most on the kind of purposeful educational television I am talking about. Compare this with the approximately $200 billion that represents our national education expenditure.

A commercial 30 seconds long on prime time television costs approximately $75,000. A 1-hour version of Sesame Street costs approximately $70,000. Consider the values that are represented by that money and that time.

There are four steps I would urge upon you as Members of Congress and leaders in this area:

One, to encourage increased production of educational and entertaining television for children. The bill that has been discussed and will be introduced by Representative Wirth I think is a notable step in that direction.

If we are to have increased production, it will take in the long run increased funding. The only source of funding that I see that is really possible in the future is Federal funding, because the record shows that private sources will not come forward with the amounts of money necessary. If we have $20 million available today, this year, for children's educational entertaining television, $100 million would transform the environment of childhood.

Third, we need to guarantee access for the kind of program we are talking about in the newer communications technologies. It has been very difficult to find access for purposeful and entertaining television in our commercial broadcast world and to some extent in our noncommercial broadcast world. In a coming world of cable television, satellite broadcasting, and direct broadcast satellites, it is important to take now the steps that will insure that we will not have those problems.

Finally, we need to build the institutions, both in broadcasting and in education, that will help produce the programing we need, support the schools in the way we want them supported, and produce the citizenry that we all believe in.

I thank you for allowing me to appear before you.

[The prepared statement of Mr. Morrisett follows:]

Lloyd N. Morrisett

President, The John and Mary R. Markle Foundation
and
Chairman of the Board of Trustees, The Children's Television Workshop

Chairmen and members of the Subcommittees:

Thank you for the opportunity to appear before you. My name is Lloyd Morrisett. I am President of the John and Mary Markle Foundation, and Chairman of the Board of Trustees of the Children's Television Workshop. The Markle Foundation is a major private foundation working in the field of television and other mass commnications technologies. During the last fifteen years the Markle Foundation has funded many studies on the ways in which television can affect children. The Children's Television Workshop is this country's largest producer of high-quality television programming for children that is both educational and entertaining.

This joint meeting of the Telecommunications, Consumer Protection and Finance Subcommittee and the Elementary, Secondary and Vocational Education Subcommittee signals an increasing public and official understanding that in this technological age there can be no effective education policy without an effective and coordinated telecommunications policy. Now and for the foreseeable future this country will be in political and economic competition with traditional friends and foes and newly emerging powers. We must also lead the free world in assisting developing countries

to new levels of well-being. Without doubt our strength is dependent upon a highly motivated, skilled and productive citizenry.

This year, three blue ribbon panels examined America's schools and found them wanting -- unable at present to provide the education needed by our children. These panels made many recommendations that if enacted would vastly improve our system of secondary and higher education in the comming decade. Acknowledged, but largely unexamined, is the fact that the quality of secondary and higher education depends importantly on the base provided by elementary education and what children learn before they go to school. Remediation at the secondary or collegiate level is a slow, costly process. Prevention at the preschool and primary level is cost effective and benefits both the child and the schools. While changing our nation's schools may take a decade or more, the effective and wise use of television can have major impact within a year.

A fourth report by the National Science Board Commission on precollege education in mathematics, science and technology proposed a plan of action for improving mathematics, science and technology education for all American elementary and secondary students so that their achievement is the best in the world by 1995. That report did include an important set

of recommendations for the better use of broadcasting to supplement schoolroom learning.

The simple truth is that education occurs both inside and outside the classroom. The school is not an isolated provider of education. It can only work effectively in an environment which supports learning and achievement. The home is a key part of that equation. Television has become a vital and integral part of the home.

Children watch enormous amounts of television. The weekly viewing average among children aged six to eleven is twenty-seven hours, totalling around one thousand, four hundred hours each year. Preschoolers, aged two through five, watch even more -- thirty-one hours and forty minutes in the average week, for a total of one thousand, six hundred forty-eight hours in one year. By the time a child completes high school, the total exceeds the amount of time spent in the classroom.

Television that is designed to be both educational and entertaining can command children's attention, teach specific skills, and impart general knowledge. Since the Children's Television Workshop was formed in 1966, it has produced three major television series for children. "Sesame Street" will start its fifteenth season on November 1, 1983. It

teaches basic cognitive skills, but has been broadened over the years to include affective skills, embracing different cultures, lifestyles and living conditions, as well as prescience, including computers and prehealth. This series has maintained a regular audience of over nine million children in the United States. While many of its first viewers have now graduated from high school and are in the workplace or college, each week more than ten million different households in this country view an average of two programs. Each year, assuming conservatively that only one person per household watches the show, "Sesame Street" receives nearly one billion four hundred million viewings in this country at a cost of much less than one penny per viewing. The educational effectiveness of "Sesame Street" has been independently documented. In two nationwide studies of the program's educational effect, the Educational Testing Service found higher learning gains among viewers than among nonviewers, and increases in knowledge in almost every curriculum area covered by the program.

"The Electric Company" was produced for six years, and has since been aired in an alternate repeat format. It was designed to teach basic reading skills to youngsters. Again evaluations by the Educational Testing Service indicated

that regular viewers scored significantly higher than non-viewers in almost all areas stressed by the series. A national study in the early 1970's showed it was the most widely used television series in classrooms, and still is, as far as we know. "The Electric Company" reaches today approximately six million children at home, and probably another 2.4 million in classrooms.

The newest series produced by the Children's Television Workshop is "3-2-1 Contact." It aims to make science more appealing and understandable to eight to twelve year olds. The first season consisted of sixty-five half-hour programs and was first aired in January, 1980. The second season, consisting of forty programs, will premier this month. In the first run alone, twenty-three million at-home viewers tuned in to the program. The series combines impact in the home, the school, and special assemblages of children, such as the Girl Scouts. For season one, more than a half a million teachers' guides were requested and distributed. Cooperative work has been undertaken with science museums, and the Girl Scouts of America has opened up new merit badge programs that specifically use "3-2-1 Contact" as source material. In Washington, D.C. alone, over ten thousand merit badges associated with "3-2-1 Contact" have been awarded to Girl Scouts. Again, the cost of viewing "3-2-1

Contact" is small. With repeat airings, season one cost less than one penny per person per viewing.

The costs of these television programs, though rising, are remarkably low. While an advertiser must pay $75,000 for a thirty second commercial in ordinary prime time, a sixty minute "Sesame Street" in 1983 costs only $70,000.

While we are proud of the record of accomplishment by the Children's Television Workshop in producing these television programs for children, it is a sad fact that the purposive educational use of entertaining television programming is still only a very small part of broadcasting. As a nation, we have not committed ourselves to using broadcasting to support schoolroom learning and create a learning society that will help us achieve the national goals that we all applaud.

This is not true in other countries. In England, for example, the BBC's two channels present a combined total of eight hundred and forty hours of children's programs each year, only a quarter of which is repeat. United States public television, by contrast, has carried no more than one hundred fifty new program hours for children in any recent year. There are now no regularly scheduled daily series for children on any of our commercial networks. A British child

growing up on the BBC's children's offering regularly encounters an impressive range of new information and ideas. At each distinctive stage in their children's development, from preschool to the age of early elementary school, and later into the preteen and early teen years, there is available in Britain a regularly scheduled and renewed offering of television geared to each age group's specific and changing interests and educational needs. A full 12.5 percent of the BBC's broadcast schedule is devoted to children.

A similarly large amount of quality children's television is available to Japanese children through the two nationwide public channels operated by the Japanese Broadcasting Corporation. In Japan, educational television is carefully coordinated with classroom learning to support what goes on inside the schools.

I submit that there is a high and continuing public interest in a consistent and long-term coordination between education policy and telecommunications policy in the United States. We know that television can teach a wide range of skills and behaviors. Beyond teaching specific skills and behaviors, we know that television can motivate an interest in what children need to know and learn. We know that

television can simultaneously both entertain and educate. If parents and older siblings are involved in the young child's television viewing, the child's learning can increase by three to ten times over what he would learn from viewing alone. We also know that television can show children the world, both the world as it is and the world as it might be. Appropriately used televsion can vitally contribute to culture and education and make it much more likely that the schools will be able to accomplish that which we are asking them to do.

We spend at least $200 billion a year on education in America. A trivial fraction of that is spent upon the purposive educational use of television. I estimate that no more than $20 million annually from all sources is spent on nationally available entertaining and educational material for children. If that $20 million were increased to as much as $100 million annually, the television environment of childhood could be transformed, and the job of the schools made easier.

Steps need to be taken immediately to coordinate education policy with telecommunications policy so that national purposes will be served:

1) Using all presently available means of broadcasting,

both commercial and non-commercial, ways should be found to encourage the production and broadcast of more programming that is both educational and entertaining. This programming should be designed to impart skills, general knowledge and motivate children to achieve the educational goals that are widely agreed upon.

2) In order to do this, increased and consistent funding will be necessary. The amount of money that is required is trivial in comparison to general educational expenditures, but it needs to be applied wisely and consistently if the long-term effect we desire is to be achieved. Realistically, the Federal Government is the only possible source for this needed money. It is pointless to look to the private sector; the record clearly shows that sufficient private funds will not be forthcoming.

3) Looking to the future, steps need to be taken immediately to guarantee access in the new distribution technologies for children's programming that is purposive, educational, informative and entertaining.

4) Steps need to be taken to develop and support institutions within education and within the television community that can provide the programming needed both today and in the future.

It is my firm belief that the deliberations of these Subcommittees could have a historic effect by beginning to develop a consistent and coherent education and telecommunications policy and steps by which it can by implemented.

Thank you for allowing me to appear before you.

Mr. PERKINS. Thank you very much.
Dr. Rubinstein, identify yourself and proceed.

STATEMENT OF ELI A. RUBINSTEIN

Mr. RUBINSTEIN. Mr. Chairman and members of the subcommittee:

Thank you for inviting me to testify at this hearing. I am Eli A. Rubinstein. I am an adjunct research professor at the University of North Carolina. I have a brief statement. I would also like to submit for the record a recently published article of mine which summarizes the findings and conclusions of the NIMH 10-year update.

If that 10-year assessment of research findings on television and behavior documents anything about television, it is the reconfirmation that television is a major influence on the social development of children. Television teaches children about the world in which they live. Some of these lessons are useful and constructive. Too often, however, television distorts the world as it actually is and provides the child with a picture that induces fear and stimulates behavior which may be antisocial.

I would briefly like to comment on these negative effects and then address the potential that television has for more positive effects.

As you know, much publicity has been given over the years about the effects of televised violence in stimulating aggressive behavior in children. Despite all the controversy on this issue and despite the present position of the television industry that there is no definitive evidence on this matter, the preponderance of scientific judgment supports the conclusion that televised violence does induce aggressive behavior in children.

It should be made clear, to be precise, that these are probably what we would characterize as weak effects, by which we mean not all children are so affected, nor are the effects highly dramatic in all instances when they do occur.

But consider the size of the population at risk. The total television audience of viewers under 18 years of age is about 50 million children. If even one-tenth of 1 percent are adversely affected by watching televised violence, we are talking about 50,000 children. If any other environmental threat involved that number of individuals, there would be a justifiable public concern. So, weak effects are still of some concern and the networks should be held accountable.

On the more positive side, it is clear that there is much potential for television to do a more constructive service to the young viewer. For example, as Dr. Sharon Robinson has already testified here, a recent report to the American people from a commission of the National Science Board notes that commercial television does not do all it could in informal education for children.

What is especially distressing in this obvious lack of greater attention by commercial television to the informal educational needs of children is that they seem to be aware of both the possibility and the responsibility for significant improvement. One small indicator of such awareness comes from a recent survey one of my students

did last year. We were surveying knowledgeable individuals about what Federal options might increase the educational benefit to preschool children by viewing commercial television in the home.

While there was no strong agreement as to viable options for such improved benefit of television viewing, there was clear agreement that television could and should be made more educationally effective. About half of the respondents were affiliated with commercial television and half were not—100 percent of those not so affiliated agreed that television could be made more educationally effective and 97 percent said it should be.

Of those with commercial affiliation, 93 percent said it should be. Of those with commercial affiliation, almost two-thirds agreed that—I'm sorry, I have that wrong—93 percent said it could be made more effective and almost two-thirds agreed it should be more effective. While the latter group are obviously less committed to change, it is quite clear that even those identified with the industry overwhelmingly see both the opportunity and the obligation to do more for the young viewer.

At this point a naive observer might ask, why is not more done? The simple bottom line answer from the industry is that television is a business and that there are presumably no profits in quality programing for children. It seems to me that that is a too pat response and that there should be a way to do better and still not lose money in the effort. For the viewing public the bottom line might well be, if it is not good enough for my children it is not good enough for me.

In a brief presentation such as this, there is no time to go into policy options in detail. Two possibilities might be mentioned, however. One is old and one somewhat new.

The old idea is the oft-recommended center for television and children. Those of us who have been concerned with translating research findings into effective policy have long since learned that reports such as the Surgeon General's do not easily translate into policy. What is needed is some long-term instrumentality for affecting change.

While a center for television and children has been recommended many times in the past two decades, it has not materialized. Its value remains if it could be actualized.

Another possibility is the initiation of what I might call a large-scale periodic environmental impact study. If TV violence is an environmental hazard, what is the environmental impact of television on children? Is it positive, or perhaps only insignificantly negative?

The industry should welcome such an environmental impact study. How to do it, and under whose responsibility, would need to be determined. It is the sort of assessment that could be a significant step in the direction of properly evaluating the effect of television on our social lives. Some thought should be given to such an evaluation.

I would be remiss if I did not point out that the responsibility for increasing the positive impact of television on informal learning is a shared responsibility. As Grace Baisinger has just said, parents should also realize that their children's television viewing time can be made more useful by more parental interest and involvement in what their children watch. Research has shown that negative ef-

fects can be mitigated and positive effects enhanced by such parental involvement.

And, of course, that shared responsibility includes a kind of governmental attention to the problems that hearings such as this and others can provide. Over time, if we all work together perhaps we can help the industry provide the kind of service to the young viewer that will benefit everyone concerned.

Thank you very much.

Mr. PERKINS. Thank you very much.

The committee will recess for 10 minutes. We will go over and vote and come right back.

[Brief recess.]

Mr. PERKINS. Go ahead, Dr. Abel.

STATEMENT OF JOHN D. ABEL

Mr. ABEL. Thank you, Mr. Chairman.

I am John Abel, senior vice president for research and planning of the National Association of Broadcasters. My background is in education and communication. Before joining National Association of Broadcasters I taught for 15 years as a professor in two Big Ten universities, most recently as professor and chairman of the largest department of telecommunication in the United States. I also served as a staff member on the FCC's children's television task force and authored a major study on children's programing for the FCC's 1979 report on children's television.

The catalyst for today's discussion is the National Science Board Commission's plan to improve our Nation's elementary and secondary math, science and technology education. If I were a TV critic, I would give the plan mixed reviews.

We are all agreed on the need to improve our educational system, but there is disagreement, even within the educational community itself, whether math and science are more important than reading and writing; whether subject/verb agreement is as important as being able to determine the hypotenuse of a right triangle; or whether chemistry is more important than foreign languages.

This reemphasis on science reminds me of the sputnik scare of 25 years ago. President Kennedy faced a similar national concern in the 1960's. The problem was successfully addressed, but the Government did not decide to become program director for the Nation's television stations.

Instead, as a nation we focused on the educational system. It seems equally wise today that we not rely on a secondary source to be a teacher at home. An educational problem must be addressed through the educational system and not through the broadcasting system.

The NAB plan makes recommendations for model schools, teacher retraining, curriculum development, high school graduation requirements, extending the school day or year, standardized testing and improved certification of our teachers. All these suggestions realistically address shortcomings of the current educational system.

Nothing works better or is even comparable to the trained professional teaching in the classroom. Individualized instruction, at-

tention, feedback, and testing by trained professionals are the best methods to help students learn.

When the Commission report departs from the school classroom to enter the broadcast control room, however, alarm bells sound. The Nation's broadcasters do not need the Government to be its programing partner. The Commission's proposal is very intrusive in a sensitive first amendment area. Dictating the program content, the length of the program, the broadcast time of day, is unprecedented and unwarranted.

I have no question but that the Commission's proposal and its motivation are well intentioned, but the purpose of the first amendment is to protect broadcasting from well-intentioned programing intrusions, as well as those that are not so well-intentioned.

There are better ways to accomplish the Commission's educational objectives than mandating daily after-school television programs. If we want students to learn more, we should keep them in school for another hour rather than send them home to watch television, to an environment where the teacher has no supervision, no guidance, no review.

Our teachers are trained to teach and are guided by a highly developed curriculum. Expecting broadcasters and parents to assume the role of professional teachers is unrealistic.

It is also unrealistic to assume youngsters will voluntarily watch educational television programs and that parents will supervise program selection. And it is naive to assume that after a full school day, youngsters will be eager and able to master the exact sciences by watching a television program.

The broadcast community takes seriously its responsibility to its young audiences. Many children's programs contain informational "nuggets." There are miniprograms at the network and local levels, as well as various programs designed to encourage reading. Broadcasters as well provide many area schools with "Teacher's Guides to Television" or other study and discussion guides based on network, syndicated or local programs. Several stations participate in the "TV News Game" or local versions of a "Current Events Quiz" or "News Quiz" by underwriting the cost of supplying materials to school systems.

At the local level, stations often have advisory committees on children's television which include area teachers. Local stations, through various outreach projects, promote and/or organize health fairs, museum tours, and many other worthwhile events for youngsters in their communities.

To foster cooperation and understanding among broadcasters, educators, parents and children, the NAB is sponsoring another Children's Television Conference here in Washington, October 10-12. I would like to take this opportunity to invite you to visit our screening rooms to view locally produced children's television programs from around the country and to attend our general sessions.

Television is an educational medium in a broad context. It acquaints one with the world at large and expands our knowledge of world cultures, societal differences and similarities, and exposes us to foreign languages. It is not well suited to developing scientific skills.

It is the trained classroom teacher, not the unresponsive television set, who teaches and teaches well. Support of our formal educational system is essential. Turning the responsibility over to television simply will not solve the problem. Broadcasting will not, cannot, and should not take the place of a qualified classroom teacher.

We as broadcasters believe we are meeting the needs and interests of children and will continue to work with educators and other community leaders to serve this special audience

Thank you.

[The prepared statement of Mr. Abel follows:]

STATEMENT OF JOHN D. ABEL

I am John Abel, Senior Vice President for Research and Planning of the National Association of Broadcasters. I have some background in education and communication. Before joining NAB I taught for 15 years as a professor in two Big Ten universities, most recently as Professor and Chairman of the largest Department of Telecommunication in the United States -- over 1,000 students. I also served as a staff member on the FCC's Children's Television Task Force and authored a major study on children's programming for the FCC's 1979 Report on Children's Television.

The NAB is the major national trade association of radio and television broadcasters. The NAB includes among its members some 700 television stations in addition to the three television networks and 4,500 radio stations. I welcome this opportunity to represent these broadcasters before your Committee.

The catalyst for today's discussion is the National Science Board Commission's plan to improve our nation's elementary and secondary math, science and technology education.

If I were a TV critic, I would give the NSB Commission's Report mixed reviews. Parts of it I endorse, parts of it I question, parts of it I reject, and in some areas I have suggestions.

We are all agreed on the need to improve our educational system but there is disagreement, even within the educational community itself, whether math and science are more important than reading and writing; whether subject/verb agreement is

or is not as important as being able to determine the hypotenuse of a right triangle, or whether chemistry is more important than foreign languages. This re-emphasis on science reminds me of the Sputnik scare of 25 years ago when President Kennedy faced a similar national concern. The problem was successfully addressed then, resulting in significant strides in technology. The government did not, however, decide to become program director for the nation's television stations. Instead, as a nation, we focused on the educational institutions and educational professionals which proved successful.

It seems equally wise today that we not rely on a secondary source -- television -- to be a teacher at home. We must focus on the real issues. An educational problem must be addressed through the educational system and not through the broadcasting system.

The NSB plan makes recommendations for: model schools, teacher retraining, a "new basics" curriculum development, high school graduation requirements, extending the school day or year, standardized testing and improved certification of our teachers. All these suggestions realistically address current shortcomings of the current educational system. Nothing works better or is even comparable to the trained professional teaching in the classroom. Individualized instruction, attention, feedback, and testing by trained professionals will work and will be productive. Classroom teaching is the best forum to help our students

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learn and teachers are our best teaching tools. Trained professionals can detect problems in a child's learning and can respond to assist that child. Students need guidance, instruction and structure that trained classroom teachers provide.

When the Commission Report departs from the school classroom to enter the broadcast control room, however, alarm bells sound. The nation's broadcasters do not need the government to be its programming partner--the program director--to set the nation's programming agenda. Freedom from federal programming fiat is the single thing that most distinguishes our form of government from others.

The Commission's proposal is shockingly intrusive in a sensitive First Amendment area. Dictating the program content, the length of the program, the broadcast time of day, and the number of days is unprecedented, unwarranted, and unproductive. I have no question but that the Commission's proposal and its motivation are well intentioned. But the purpose of the First Amendment is to protect broadcasting from well-intentioned programming intrusions as well as those that are not so well-intentioned.

There are better ways to accomplish the Commission's educational objectives than mandating daily after school television programs. If we want students to learn more, we should keep them in school for another hour rather than send them home to watch TV--to an environment where the teacher has no supervision, no guidance, no review.

If we want students to learn more, we should issue quality homework assignments--which provide quick feedback as to whether the day's lesson was understood--by whom and how well.

Through teacher evaluation and supervision, an individualized learning program and interaction will help the student learn. For example, if students need physical exercise, we do not send them home to watch a TV show on exercise--because some will exercise without supervision but most will not. Instead, we make them take a gym class where there is supervision. And it is naive to assume that after a full school day, youngsters will be eager and able to master the exact sciences by watching a television program.

Our teachers are trained to teach and are guided by thoroughly developed curricula. Expecting broadcasters and parents to assume the role of professional teacher is unrealistic. It is also unrealistic to assume that youngsters will voluntarily watch educational television programs and that parents will supervise program selection. What if the TV program and its lesson are not understood? The youngster will have to ask the teacher the next day--if he or she remembers the question, or ask an authority figure at home where there may be no answer or, worse yet, the wrong answer--neither of which positively contributes to the parent/child relationship.

The broadcast community takes seriously its responsibility to our young audience. Many children's programs contain informa-

tional "nuggets." (For example, explanations on prehensile tails and how diamonds are made from coal under pressure). There are mini-programs at the network level ("Multiplication Rock," "Grammar Rock," "In the News," etc.) and local levels ("Nooze Reports," "Minute Mores" and others) as well as various reading programs designed to encourage reading. Broadcasters as well provide many area schools with Teacher's Guides to Television or other study and discussion guides based on network, syndicated or local programs. Several stations participate in the "TV News Game" or local versions of a "Current Events Quiz" or "News Quiz" by underwriting the cost of supplying and mailing classroom materials to school systems every week school is in session. At the local level, stations often have advisory committees on children's television which include area teachers. Local stations, through various outreach projects, promote and/or organize health fairs, museum tours, and many other worthwhile events for youngsters in their communities.

To foster cooperation and understanding among broadcasters, educators, parents and children, the NAB is sponsoring another Children's Television Conference here in Washington October 10-12. I would like to take this opportunity to invite you to visit our screening rooms to view locally produced children's television programs from around the country and to attend our general sessions. These sessions will examine current children's program development, evaluate children's television programs

and provide a platform for D.C. area school children, ages 9-12, to discuss their views of the world of television.

In addition to screening and general sessions, you are also invited to participate in our workshops where educators, station managers, community affairs directors and producers are working together to provide all of us with a a better understanding of the complexities of children's television. It is through the sharing of knowledge and information that we can best serve the needs of our nation's children and NAB has spearheaded this effort and will continue to facilitate these exchanges.

We look forward to your support and participation. (As soon as our children's TV Conference materials are ready for release, we will provide you and your Committee members complete packets.)

Television is an educational medium in a broad context--it acquaints one with the world at large and expands our knowledge of world cultures, societal differences and similarities, and exposes us to foreign languages. It enriches our lives. We gain a general appreciation of others and learn that a smile is a smile in any language.

Commercial television acquaints one with concepts. It is not well suited to developing scientific skills.

We all know that learning, especially the learning of science and mathematics, requires reinforcement, feedback, and interaction. It is the trained classroom teacher, not the unresponsive television set, who teaches and teaches well. Support of our formal educational systems is essential. Turning the responsibility over to television simply will not solve the problem. Broadcasting will not, cannot, and should not take the place of a qualified classroom teacher.

We, as broadcasters, believe we are currently meeting the needs and interests of children and will continue to work with educators and other community leaders to serve this special segment of our audience. We are proud of the present and confident of the future.

Mr. PERKINS. Thank you very much.

The witnesses to my way of thinking have certainly presented convincing testimony in favor of using television to further the education of children. Could the witnesses tell me who would oppose Mr. Wirth's idea that an hour a day be set aside for educational programing, and what would their reasons be for opposition?

Is it a matter of lost revenue or the cost of developing new programs? We will start with you, Dr. Abel, and go all the way across.

Mr. ABEL. I think we would oppose it, largely on first amendment grounds.

Second, we believe that there is programing available. For example, in 1973–74 and 1977–78 the FCC conducted a study of the availability of children's programing. I think in 1973–74 they found on an average commercial television station that there were about 10.5 hours of children's programing available. And in 1977–78 that it increased to about 11.3 hours in a composite week.

If you look at the average broadcast station being about 18 hours per day, that works out to about 10 percent of the total broadcast time is devoted to children's programing. So I guess in one sense we would say it is available. In another sense, we would oppose it based largely on first amendment grounds.

Mr. PERKINS. All right. We will hear from you now, Dr. Rubinstein.

Mr. RUBINSTEIN. I think that Dr. Abel presents what seems like an either/or situation. I think that is a misinterpretation of what many of us are suggesting. Television can be extremely helpful as an adjunct, as informal education, and not as formal education. It is not intended that we improve television in lieu of formal education, but precisely because it is an adjunct.

The FCC in 1977–78 had a proposed rulemaking about increasing the amount of educational programing on television. That did not pass, but it is clear that ought to be done, and I would certainly conclude with you, Mr. Chairman, that it is a very good step in the right direction.

Mr. PERKINS. Mr. Morrisett.

Mr. MORRISETT. As you know from my testimony, Mr. Chairman, I would support the idea that there should be considerably more educative television programing both on commercial and noncommercial broadcasting. I think the opposition to this idea will come primarily from two sources. One is, there will be a belief that there will be lost revenue as a result of this. Second, there will be a belief that increased production costs will be required.

When the amounts of time stated about presently available commercial children's television are quoted, we are talking largely about cartoons and about very low-cost production. If we are talking about programing that is developed for the educational and entertainment values, there is very little on commercial television at present. In fact, there is now no weekly daily series available on any commercial network for children. "Captain Kangaroo" was the last remaining of these programs. It has since been moved to a different time slot on the weekend.

So, I think the opposition primarily will center around potential lost revenue and increased production costs, and I submit that in the Nation's benefit, those are well worth incurring.

Mr. PERKINS. Thank you very much. Mrs. Baisinger.

Ms. BAISINGER. Certainly Mr. Morrisett has stated the point very well. National PTA would be very supportive of any effort to increase the amount of age-specific programing on a regular basis. By that we mean programing each day of the week from 8 a.m. to 8 p.m. or even later.

I think the issue here for those who would oppose such efforts when they inject the first amendment threat, they are using the first amendment as a smokescreen in an attempt to hide behind it. The real issue is money and the buck. The kids are not the big consumers. Therefore, why should commercial television have much effort to devote excellence in programing for children?

Mr. PERKINS. Dr. Robinson. Pull that microphone up to you.

Ms. ROBINSON. Mr. Perkins, I would point out one other arena that will require some discussion. If the FCC under its current leadership holds any clue to the area of opposition, I would have to suggest that perhaps this administration would not find this bill acceptable, this concept acceptable. I think here we are looking at some argument about free enterprise and the phenomenon of let the marketplace govern itself. I am reminded of this concern because we often hear the problem cited of generating the audience for our children's television programing. It has been our experience that when we have attempted to work with the networks on promoting programing we know to be forthcoming and we know to be of high quality, some of our members and some of our students are very often disappointed because scheduling is so unreliable. With those conditions, it is impossible to generate an audience, and it is impossible to create the kind of commercially attractive audience that children's television ought to be and could be.

Mr. PERKINS. Mr. Singer.

Mr. SINGER. A couple of points, Mr. Chairman.

First, I think that one of the major concerns in structuring any legislative response must be the avoidance of competitive disadvantage. That is, I think that when we are talking about the negatives from a broadcaster's standpoint, obviously it is not simply the lost revenue or the time on a particular hour. It may be what it does to an evening schedule or to a lead in to switching the dials and all the rest, which may lead to some sort of competitive disadvantage.

So, I do think we have to think through the scheduling so that no one achieves that kind of negative or positive advantage, because if that is the case, I believe you will have broadcasters using this in a way that does not achieve the purpose.

Second of all, I want to read a quote from the Librarian of Congress, Daniel Borstein. It appears on a production we did in cooperation with CBS. It says, "Watching television and reading books are the best media for spontaneous education, and that is why I believe in their coexistence." That is consistent with what other witnesses here have said.

I notice Mr. Morrisett used two words consistently together, "educational" and "entertaining," and I think that it is wrong to assume that because you do not have an instructor right there with you in the house or watching the television that it cannot be educational. The record of "Sesame Street" is that it is amazingly educational and amazingly entertaining at the same time. Who would

deny that "Roots" did not have a tremendous educational impact on the American public relative to our history involving slavery, involving the whole civil rights movement in the United States? Who would deny the positive impact of a program like "Roots" educationally?

And to the extent that the networks, ABC in that instance, maximized that through advertising and promotional materials and educational materials, or that NBC did with "Shogun," our understanding of Japan and understanding the culture, we could have a tremendous positive educational impact, and to say that we could not is foolish. I think we must recognize the duality of entertainment and education if we are going to be successful in achieving that hour, 2 hours, or whatever time is set aside for programing. Otherwise, you will end up in the competitively disadvantageous situation.

Mr. PERKINS. Mr. Wirth.

Mr. WIRTH. Thank you very much, Mr. Chairman. I greatly appreciate having this splendid panel with us today. I would just like to quote a couple of summary statements that I think most all of you would agree. First, Mr. Morrisett, you said that the simple truth is that education occurs both inside and outside the classroom. The school is not an isolated provider of education. It can only work effectively in an environment which supports learning and achievement. The home is a key part of that equation, and television has become a vital and integral part of the home.

And Dr. Rubinstein is saying television can no longer be considered as a casual part of daily life, as an electronic toy. Research findings have long since destroyed the illusion that television is merely innocuous entertainment. While learning, it provides us mainly incidental rather than directly formal. It is a significant part of the total acculturation process.

Now, to the critics of the notion of using television as an adjunct, I think those are two very eloquent responses.

Now, Mr. Abel, on behalf of the NAB, says that "The broadcast community takes seriously its responsibilities to our young audience." We have examined that in the subcommittee to see how seriously in fact the industry does take its responsibilities. In an effort to better understand what is being done today, the Subcommittee on Telecommunications sent a questionnaire to every commercial television station in the Nation.

Although a congressional request usually elicits very high response rates, on this one only 40 percent of the stations designed to respond to the U.S. Congress. Last night we received the first computerized data from the survey. Results on children's programing showed that this Nation's commercial broadcasters devote only 61 minutes a week to educational programing for children, or three-quarters of 1 percent of their daily air time, while cartoons make up 152 minutes of children's programing. Including all other programing, the nuggets, referred to by Dr. Abel, including all other programing such as game shows, according to the broadcast industry's responses, stations on average air a grand total of 11 hours per week that might be related to children. That translates to about 3 percent of the total air time.

Frankly, I was really surprised, and I would say deeply disappointed by these statistics, and I am sure that these figures are underestimated. When it comes to cartoon programing, as one looking at any TV for Saturday morning alone would note, there is a plethora of "Spiderman" and related efforts for kids on Saturday morning.

I was also surprised by which stations aired the most children's programing. I would have thought that the wealthier networks would have been the ones to do most of the programing, given that we have heard children's programing is unprofitable. However, it is just the opposite. Our data showed, surprisingly, that independent stations aired twice as many minutes of children's programing each week as do the networks.

The question, it seems to me, is, are we going to be serious as a nation about everybody responding to the challenge of educating and socializing in our young? In a democratic society, it seems to me there is no greater task that we face than bringing the young into the ability to participate in this society, whether they are rural or urban, black or white, rich or poor. All our children must be brought in and given that opportunity.

We have always said we all have that responsibility, not just in the little red schoolhouse, not just the schools from 8 to 3 during the day, but everybody has the responsibility to work on it. We also must require those who use a very precious resource, which is the spectrum provided to the networks and to the broadcasters, a scarce public resource, to fulfill their obligation to participate in the educational process as well.

That is all we are asking, and that in a democratic society. I strongly believe that this is not too much of a request to make. I thought that data was very interesting, and I appreciated you all being here. Do you have any response to those numbers? Does that surprise you?

Mr. RUBINSTEIN. No.

Mr. WIRTH. Dr. Morrisett.

Mr. MORRISETT. No.

Mr. WIRTH. Dr. Abel, are you surprised by the numbers?

Mr. ABEL. I have not seen them. I have only heard you report them. I have not seen a report from the subcommittee. I would be interested in receiving that, by the way. We have a study in progress where we have probably 100-percent cooperation from 30 or so markets, all of the commercial stations in those markets. The preliminary results are substantially different from what you report here, although I am not sure if you were able in your survey to adequately sort out, or the broadcaster would be adequately able to sort out the definition of an educational program.

Furthermore, I think some of the other panelists in subsequent panels may respond to the notion that in the total marketplace, including public television stations and cable programing services, that there is substantially more educational programming available in the marketplace than what your study would indicate.

I might point out that the NAB study looks at public television stations as well as cable, and has criteria for what would be an appropriate level of cable penetration that would show that there is

substantially more educational programing and substantially more children's programing in the total marketplace.

The thing that bothers me about your study is that it was, and I think broadcasters perceived it as an overwhelming intrusion into the operation of their business. Furthermore, the definition——

Mr. WIRTH. How is a study of what the broadcasters have on an intrusion into the marketplace?

Mr. ABEL. Because the definitions were very arbitrary of what children's programing was, and particularly the educational and informational aspects of children's programing were inadequately defined in your questionnaire.

Mr. WIRTH. The "arbitrary definition" was, as you probably know, the same one that has been used by the FCC for years and years——

Mr. ABEL. Is that true of educational informational programing?

Mr. WIRTH. Yes, in terms of defining what programing we were asking for. How that could be an intrusion into the business of broadcasters is beyond me. Does the public not have the right to know what is being shown over the public airwaves? Does the public not have a right to know, to be able to categorize, to be able to say this is what is going on in prime time, this is what goes on in the afternoon? Does the public not have a right to know that? Is that an intrusion into the broadcaster's business?

Mr. ABEL. I said I think they perceive it as an intrusion.

Mr. WIRTH. Can the U.S. Congress ask the broadcasters of this country to tell the U.S. Congress what it is that is being shown over the public airwaves? Not that one thing is good or bad. Just tell us what is going on. Sixty percent of the broadcasters are arrogant enough not to respond to the U.S. Congress request for information. And your trade organization, in fact, writes to those broadcasters and says to them, do not respond. Please tell us what is going on. I find that absolutely extraordinary.

By the way, Mr. Chairman, that is an issue separate from what we are discussing today, but symptomatic of the problem of the relationship of this overall environment to, again, the education and socialization of our young. That is the issue we are concerned about, and I happen to believe that everyone has a responsibility. You cannot lay it off on cable or lay it off on public broadcasters. We all have that responsibility and should create more plans for how we are going to fulfill that responsibility.

Thank you, Mr. Chairman.

Mr. PERKINS. Thank you, Mr. Wirth.

Mr. Packard.

Mr. PACKARD. Thank you, Mr. Chairman.

It has been a very interesting discussion and a very interesting panel. I appreciate you being here. There is not anyone who feels stronger than I do, I do not believe, in this Congress about cleaning up and improving the quality of TV that people—children—and people, in general, are watching. I expect that the concern is how do you go about doing it? And in the process of doing that, is it the appropriate way for the Government to take over the programing and to begin to regulate further that programing?

I think it has been interesting that TV in America, competitive TV programing in America has survived in a very highly regulated

industry. I think the question each of us has to ask ourselves is, as you further regulate, is there a point beyond which you can regulate before it becomes taking over the process of programing?

I think that our efforts should be first in the area of removing the negative, removing the violent and the sexually oriented programing that is detrimental to our children, and is aired into our homes without our approval, and I think that needs to be concentrated on—perhaps before we start taking over the programing and mandating certain kinds of programing. Educational TV is a very commendable process.

Let me make one or two other comments before I ask a couple of questions. The countries where we do have totally regulated TV programing are not the kind of countries that I believe our citizens are requesting that we live in. Russia has a totally controlled program of TV, and many of the other totalitarian governments do. And I am not sure that that is the type of programing that we want.

Another concern I have is that the children are in school now all day long, and the Commission reports on improving the quality of education in America that we need to increase the homework, and I personally believe that. I think it is important that we improve and increase the homework requirements.

So, the question would have to be, if you expect the children to go home and do their homework after 6, 7 hours in classrooms, is it expected that they would then want to sit down and watch another hour or so of science and math or educational TV, and particularly if they have the choice of turning the knob to something else?

What will they choose? Will they choose 1 more hour, perhaps their only hour of free time? Would they choose educational activities on TV, or would they choose "Mash," or "Dallas," or some other programing that they are used to watching?

Another concern I have is, who is to determine the quality of the programing? If you leave it to the networks and the independent stations, they will have to set up a whole new department for that purpose, and the question is, would it be experts that would help to do that for 1 hour of programing every 24 hours, or would they rely upon their existing staff, which are expert in entertainment and other activities of TV programing, but would have no experience in education, and would it dilute our existing emphasis on educational TV?

Now, let me ask a couple of questions to help clarify these questions in my mind. First of all, and perhaps Dr. Morrisett might be the one who could answer this, or if anyone else could, is there any existing Federal funding for educational TV that is now being programed? Do we have any educational TV programing where it receives Federal funding?

Mr. MORRISETT. Yes, we do, of course. The Corporation for Public Broadcasting has substantial funds, Federal funds flowing in for educational programing, and other witnesses who will be on later can talk to that better than I can. Within the various departments, the National Science Foundation, the Department of Education, and other departments, there are no earmarked funds as far as I know for educational television programing. Some funds do go from other programs into those areas, as, for example, the support by

the National Science Foundation and the National Education Foundation of "3-2-1-Contact."

Mr. PACKARD. I was going to ask if "3-2-1," "Sesame Street," "Electric Company," or "Roots," as have been referred to on several occasions, did they receive any special Federal funding?

Mr. MORRISETT. Sesame Street was originally supported one-half by the Federal Government and one-half by private sources. No longer do any Federal funds support "Sesame Street." The Public Broadcasting Stations pay about one-third of the cost, and the Children's Television Workshop, through its own revenues, pays two-thirds of the cost. The "Electric Company" was originally supported through Federal funds. It is no longer supported at all by Federal moneys. Some Federal money does generally go into "3-2-1-Contact."

Ms. ROBINSON. Mr. Packard, I would like to also point out that under the Emergency School Assistence Act [ESAA] a number of award-winning programs were produced and can be made available free to any station that wishes to air these programs. These are age-specific programs that have already been developed that help us to address some of the problems of stereotyping, cultural bias, cultural awareness. These are good programs that were produced with Federal funds and can be made available to any station for airing. The problem is getting the air time from the stations to use these programs.

Mr. PACKARD. Excellence is in the eye of the beholder often, and if in fact those programs are highly desirable and would bring about high viewership, why then is it necessary to mandate that there be an hour for such programing?

Ms. ROBINSON. At this point there is no reason to offer anything, because programming, the students, the children will turn the current programming on. There is not enough in the environment to encourage them to be discriminating viewers, and it is the adults who have the authority to also take the responsibility to make this available.

I believe that if it is consistently available, students will turn it on and become accustomed to utilizing it, such as they do with "Sesame Street." My daughter spent all day in preschool and came home and still watched "Sesame Street" and "Electric Co." as a preschooler, because that is what I saw to it that she turned on. But if parents are not there, some of us who can help to control what came into the home need to take that responsibility, and I believe parents would welcome that assistance.

Mr. PACKARD. We have found that those programs that have been funded under the Emergency School Aid Act, where the programing was funded and prepared and presented through a controlled environment such as that, that the ratings and the viewership was very poor and very negative. It would appear to me that the best approach to educational TV is in a concentrated and quality environment rather than a shotgun method of having every station carry 1 hour where it would virtually be uncontrolled and at the mercy of the television expert programers rather than from the educational level.

So that if there are Federal funds earmarked for educational TV, it would be in an educational TV environment, and concentrated to

the point where we could expect and could control the excellence and the quality. Do you have any response to that? Do you feel it would be better to give a smattering of educational TV programs on all programs?

Mr. SINGER. Well, I share your concern. Obviously, if you have a funded program on one channel and "Mash" or any of the other programs, which happens to be a good program, or "Dallas," or some of the other ones, you might be wasting Federal money. That is what I meant before when I said, competitive disadvantage when you have a scattergun approach.

I do think it is now important, though, that this is not simply a question of program time allocation. It has got to be a much greater concentration of ancillary resources as well, and requiring the cooperation of the educational community and the parent community. You cannot do it alone. Let me give you an example.

When the National Geographic specials were aired on public television for the first time, the underwriter of those programs, Gulf Oil Co., spent an increased amount of money to promote those programs, including promotion on commercial broadcasting. The viewership of those programs, the National Geographic specials, which are marvelous educational programing examples, was four and five times higher than comparable public television programing aired at exactly the same time.

In other words, it is a combination of resources, not just the availability of the program in the air time, and you will have to put those things together to make it successful. I submit to you that why some programs that were funded by the Federal Government did not work is, you did not have the exact combination of promotion and educational involvement together with the programing allocation.

Mr. PACKARD. I have taken more than my share of the time, I think. Let me just conclude by commenting that in none of the reports that I have studied rather thoroughly on improving the quality of education in America—there have been many, as you know—this question of the responsibility of television, public and commercial, to provide a portion of that improvement been addressed. I find that interesting, that they sense that that is not necessarily the most appropriate place to improve the quality of education.

There is no question that children are being educated through television, and I have as much concern as anyone as to the quality of the material coming over the air, but I am not certain that the best answer is to regulate the programing and require a certain type of programing. You could also require the arts and sciences to be represented for an hour every day. You could also require many other areas of people's total television, not just in the area of the academics.

Certainly I am open to the bill, but it will require a great deal of study on my part before I would feel comfortable in regulating an hour a day of television. What hour it is going to be, how it is going to be shown, how it is going to be competitive with others from one station to another, and what the regulations are will be of great concern to me, as well as the quality of the program.

Thank you very much.

Mr. PERKINS. Dr. Rubinstein raised an important point there at the last. Would you care to comment on that?

Mr. RUBINSTEIN. I think, Mr. Packard, the reason that the education concerns in the past about improving education have ignored television is not because of deliberate understanding that television cannot make an impact, but an unfortunate ignorance on the part of those groups that television is in fact as important and influential as it is. I think one of the findings we came out with in the 10-year update I alluded to in my statement is precisely that commercial television as in formal education is as powerful and persuasive as it is, and I would hope and predict that future efforts, as this recent National Science Board Commission recommends, to improve the role of all facets of American life on our educational process would very much include the role of television as an informal educator.

Mr. PACKARD. I just wanted to respond to that maybe with a question. Are you suggesting, then, that the Federal Government take the role of determining what is available to the public in terms of programing, in terms of other services, not just television?

Mr. RUBINSTEIN. I would like to respond to that by saying that most of us who have done research in this field, and I am getting a little bit out of my element by going beyond the issue of research, but it is pertinent to note, most of us who are doing research in the field are very much opposed to Federal regulation of program content. But that is not to say that there should not be some Federal concern with the rather mediocre if not abysmal kind of position that commercial television has taken in the past.

I think, for example, it is a very serious indictment of commercial television that they did not initially produce and actually air "Sesame Street". There was the talent and certainly the financial resources to produce "Sesame Street". What is interesting about "Sesame Street" is precisely that it is for preschool children. Each couple of years you have a whole new audience becoming available to you. Why did not commercial television produce a program of the excellence of "Sesame Street"?

Mr. PACKARD. I certainly agree that commercial television—there is an indictment against them, in my judgment, in terms of the quality of programing as it relates to the morals and the ethics and the standards the American people are trying to achieve and maintain. The question is, how do you achieve that? That is the real issue in my judgment in this matter.

Mr. PERKINS. Mr. Biaggi.

Mr. BIAGGI. Thank you, Mr. Chairman.

I have a couple of observations, and then a question, one to Mr. Abel. Your revelation here this morning indicated that there is only 40 percent response to a questionnaire put out by Chairman Wirth to all of the broadcasters. I was also informed that a telegram went out from your organization, Mr. Abel, suggesting that it was only voluntary.

We are both experienced enough in life to know that that should have been an official communication, so what you were doing, I think, was performing a disservice or developing a perception that we are in an adversarial position. I really do not think that is the way we should be at this point. We do have common interests, and

hopefully, working together, we should produce a satisfactory piece of legislation to accommodate all of our needs.

When you suggested that we had a 100-percent response, there was some laughter in the audience. I understand it, but that tells us something. We do not, as Members of Congress, take lightly the issuing of questionnaires to determine a national response from ostensibly a responsible industry, an industry to a large extent that is dependent upon the U.S. Government.

Now, you offered several arguments. One was the first amendment. We have heard that offered time and time again. I think it is specious in this case. But let us explore that. What about the sense of responsibility, that the broadcast industry should have responsibility to the young folks of our Nation? I do not think a response is necessary. It is rhetorical. But it does also raise the issue.

Also, I think you attempted to mislead this committee when you said that an average of 10 percent of time was devoted to children's programs. Now, when you consider what we are seeking, and then you respond by saying 10 percent of the time is devoted to children's programing, I hope you do not want us to believe that the cartoons, which probably make up most of the 10 percent, would be regarded as educational instruments.

While we are talking about that, that number is not even all that impressive. I was reading Mr. Morrisett's testimony. He says that BBC allocates a full 12.5 percent, and even further in Japan. Notwithstanding the point that you have raised where you said that this would not be a substitute for classroom teaching, and no one said it was, Dr. Rubinstein said it was an adjunct, a supplement. In Japan, they coordinate their television programs to what occurs inside the school, inside the classroom, and that is exactly what we are talking about.

My colleague, Mr. Packard, who is definitely concerned, and has given this considerable time and attention, and I agree it will require time and detailed studies and very serious deliberations, suggested that we should concentrate the timing and also have some Federal educational programing. Nothing would please me more.

This Education and Labor Committee on which I serve with Chairman Perkins has devoted itself since its creation to providing additional funding and creating programs for enlarging education and enhancing those educational opportunities for the young folks of our Nation, but the gentleman's suggestion that there be Federal funding is salutary.

I want to assure the gentleman, and I am sure Chairman Perkins would agree, and I am sure so would Chairman Wirth, that we would be happy to join the Republicans on that issue to provide some Federal funding, because I can see it as an adjunct, as an organized adjunct to ordinary classroom activities. I can see it as a definite enhancement of education for our children.

One question. Dr. Rubinstein said TV distorts the world and can have negative effects. What kind of research has been done to examine other aspects of the TV programing on children, such as stereotyping, which is consistent with my opening comments? Stereotyping comes in many forms. It is not confined to minorities. We know the difficulties. I will not even dignify them by illustrating them. We have dealt with them in the past. We have raised the

issues in the past with relation to one ethnic group, as in other ethnic groups, each one burdened with their own particular burden, and there has been some substantial progress when we have brought it to the attention of the networks, but clearly much remains to be done.

But the question to you, as I said, was, what kind of research has been done to examine other aspects?

Mr. RUBINSTEIN. There has been a good deal of research that has devoted itself to the issue of stereotyping. Let me, to be fair to the industry, point out that in any effort to present a dramatic portrayal of events or individuals, there needs to be some simplification of human behavior, and often that will result in some kind of stereotyping, but beyond that, I think it has been clear in the research that has been done that there is racial, sexual, ethnic, and age stereotyping of various kinds.

And as you pointed out, when groups concerned about this particular stereotyping then go to the networks, either in an effort to change voluntarily or under some kind of public pressure, there has been some response. Certainly the presentation of blacks on television has changed, not sufficiently, but to some extent. The Gray Panthers has been very active in trying to get the networks to change the old stereotype of the aged person as being feeble if not mentally ill and unable to take care of themselves.

The fact that most commercials show individuals, both male and female, who tend to be somewhat more handsome and goodlooking than most of us happen to be has been somewhat modified. There has been a good deal of research that demonstrates that stereotyping of all kinds is quite pervasive on television.

Mr. ABEL. Could I comment, Mr. Biaggi?

Since most of your——

Mr. BIAGGI. I knew you would not remain silent.

Mr. ABEL. Since most of your comments were directed to my testimony and NAB, I would like to comment on that, if I could.

Mr. BIAGGI. That is true.

Mr. ABEL. First of all, your comment about the telegram, perhaps you misinterpret the importance of that or overexaggerate its importance. It was not intended to create an adversarial relationship between broadcasters and the subcommittee.

Mr. BIAGGI. It was not intended to promote a cooperative spirit.

Mr. ABEL. As a major trade association with members, we feel a responsibility to inform members of the Government's request for information, and we sent them a telegram informing them that the questionnaire was coming in the mail. It was pointed out to them, yes, that it was voluntary, but we assumed that there is no requirement in the United States that all people respond to Government requests.

Mr. BIAGGI. Dr. Abel, excuse me for interrupting. You said we assumed. Are you sure your assumption is accurate? Let me suggest that if there was a spirit of cooperation, clearly it was not here; that, yes, you could have stated it was voluntary, but since it is the Congress of the United States posing some questions with relation to our industry, we would suggest that you cooperate. It is as simple as that.

Any way you play with those words, Doctor, is not going to change the conclusion that members of this committee or any observer would have to necessarily arrive at. We know what you do with words. People have crafted them in the most skillful ways since the beginning of time.

We are convinced, notwithstanding your response, that the sense of cooperation that should have emanated from your organization was not forthcoming, and I regret it because I hold the organization in great regard.

Mr. ABEL. Well, I return to the point that I believe that we engaged in a simple communication to inform members of the coming of a questionnaire that would be arriving in their office a few days or a few days after the arrival of the telegram.

Furthermore, you commented on my testimony. The testimony was oriented to the National Science Board Commission's report on improving education for mathematics, science, and technology. That was what I had in mind when I put pen to paper on this testimony. And I am still convinced as an educator, a former educator, that the television system of broadcasting that we have in this country is not the appropriate way to address problems in education. It is the educational system that needs to address those problems, especially in the areas of mathematics, science, and technology education.

Mr. BIAGGI. Let me suggest to you that it is Congress that is addressing that at this point. That is who is addressing it. This is an initiative. It is a new one. Congress is looking into it. We have not arrived at a conclusion. Congressman Wirth will be introducing legislation. We do not know what is going to happen to that legislation, whether it ever reaches a stage of maturation of enactment or whether it will be reformed and amended.

Clearly, the process is uncertain here, down the pike. You are talking about what we should do with the educators or whatever. We welcome your suggestions in your testimony, but we have access to the educational community, probably greater access than most anybody in the country because they are here all the time. So what you are delineating is not impressive.

Clearly, the educators should be involved in the programing. Then if it ever comes to pass or legislation ever comes to pass, your broadcasters will be seeing them. They will have consultants—there is no question in my mind—as they have consultants in other areas that require special knowledge.

Would you like to complete your response? I am sorry I am interjecting, but I think this does have a sense of continuity.

Mr. ABEL. My testimony was related to the National Science Board's report. In the report they say that there should be time devoted to science education, mathematics, technology on broadcast stations, and if there is a deficiency in the educational system, I think the educational system should address it, not the broadcasting system. That was my simple point.

Mr. BIAGGI. Well, we have a deficiency in the educational system. That is a given. It is recognized by all. Now, how to respond to it, no single response. We should utilize all the instruments available. We are talking about television, one of the most

powerful, influential instruments that have developed in the last several decades.

Mr. WIRTH. Would the gentleman yield?

Mr. BIAGGI. I would be delighted to yield.

Mr. WIRTH. Just to follow up the logic of Dr. Abel's statement, I would suggest that when we have a program like "Cosmos" or a program like "The Greatest Sin," they do not make any difference; they are not adequate supplements for science education in the schools. Is that what you mean?

Mr. ABEL. No, I do not mean that.

Mr. WIRTH. Maybe you ought to clarify what you mean then. Are you saying those television programs do not make any difference?

Mr. ABEL. No; I think the programs do make a difference. In fact, I mentioned in my testimony that commercial television and public television do a good job of dealing with the broad concepts. I am simply dealing with the point that commercial television is not the place to teach the specific skills related to science——

Mr. WIRTH. Well, you are saying that, but you are formulating a whole operation, Dr. Abel, that is absolutely out of bounds in terms of what we are doing, as was pointed out by Mr. Packard. We do not have any responsibilities, nor should we in the Congress, of defining a specific program that you will teach X context or Y. That is an incredible violation of the first amendment, Dr. Abel, and I would be surprised if anybody at the NAB would support that kind of intervention in specific programing.

Mr. ABEL. I was just responding to the National Commission statement.

Mr. BIAGGI. Dr. Abel, I noticed you did not respond to my comment on the 10 percent. You said 10 percent of the time was currently being utilized for children. You are not trying to leave this committee with the impression that that 10 percent is educational or any part of it, are you?

Mr. ABEL. Some part of it is definitely educational.

Mr. BIAGGI. To what extent?

Mr. ABEL. I really do not know that.

Mr. BIAGGI. We would appreciate for the record if you would provide this committee with that part.

Mr. ABEL. That is in the FCC's 1979 report on children's programing, I believe. [See p. 68.]

Mr. BIAGGI. It would appear to me that—I watch it at night with my children and grandchildren and on Saturday mornings. I find living very difficult in my house because there simply is not any choice for an adult, and I am not sure I am certain none of those programs are educational, the array of programs and the types that they have. I think that is where the heavy concentration is. I am not about to suggest how it should be programed, but certainly I would suggest do not use 10 percent in defense of a query with respect to the intent of this legislation.

Thank you, Mr. Chairman.

Mr. PERKINS. Thank you, Mr. Biaggi.

Mr. Nielson.

Mr. NIELSON. Thank you, Mr. Chairman.

Mr. Singer made a good point a moment ago when he talked about cooperation that can come from the parents and teachers in order to improve the watching of television at home.

I would like to ask both Dr. Robinson and Mrs. Baisinger if they feel that his point was well taken, that if the programs are there, if the children's programs are there, that the parents and the teachers can send notes home to the parents and cooperate.

Do you not think that would get them to watch the right programs even if the parents are not there? Would that not help them a lot?

Ms. ROBINSON. Certainly it helps a lot. We take every opportunity to promote programing we know of in advance and that we have occasion to recommend to students and parents. But the point is that does not happen very often because there is not that much to promote.

Ms. BAISINGER. I think the key here is the sustained regular basis of programing. Unless parents know about the programing and truly know about the content, they cannot be very effective in promoting the watching of such programs by children or in discussing the program, because that is equally as important.

Mr. NIELSON. Please, both of you comment on another question. On page 3 of Dr. Abel's remarks are there better ways than mandating daily after-school television programs. If you want students to learn more, we should keep them in school for another hour rather than sending them home to watch TV in an environment where the teacher has no supervision, no guidance, or no review.

Do you agree or not agree with that statement?

Ms. ROBINSON. I think the statement depends upon an unfortunate oversimplification of the learning process. What happens in school can be greatly enhanced by what students do in the course of the rest of their lives—at home, in church, in interaction with their peers, in play, whatever.

And as we look at the prospect of television to help simulate various situations where students can see certain principles in operation, they can extend their understanding of certain concepts, we cannot ignore the potential of television to assist learning in that way.

Mr. NIELSON. My question is could it not be done better in the school, for an extra hour in the school rather than having the same hour at home? That is a question.

Ms. ROBINSON. I do not think you can draw the conclusion that it can be done better in school without some extension of the support given the schools in terms of resources and media available. If the schools do not get increased support so that we can diversify learning opportunities and learning approaches, I would not sit here and say that an extra hour would do the trick or be a panacea, nor would I suggest necessarily that my list of uncreative programing would do the trick either, because we have enough of that already.

What I am suggesting is that deliberately developed programing for young people, age-specific programing that is scheduled at a predictable and reliable time, at a time convenient for viewing, it would work; it would generate an audience.

Mr. NIELSON. I am not asking that question. I am asking can it be done with an extra hour in school so that they would watch a

program rather than sending them home an hour earlier and watch anything they might happen to see? That is my question.

Ms. ROBINSON. No, I am not avoiding your question. I am saying no.

Mr. NIELSON. You are saying no.

How about you, Ms. Baisinger.

Ms. BAISINGER. I would have to say no, too. I think we can look at the way we are presenting science in our schools, and perhaps instead of all classes being limited to 50 minutes as they are today, have the science periods extended.

But this is a different issue. This provides a bonus or an assist to students in their science education as proposed in the report by the use of television is very different from the formal instructional program in school. And today with video cassettes these programs can be recorded, and children can watch them, and refer back to them, and use them as they do an encyclopedia or any other reference book.

Mr. NIELSON. Mr. Singer, did you have a comment on that?

Mr. SINGER. I think Mr. Biaggi mentioned the coordination of education and television in Japan. The organization I represent produces materials that are designed to encourage the teacher to encourage the child and the parent to watch the program at home.

I do not know if another formal hour is what we are talking about in the classroom. I think rather what we are talking about is an hour that might be used to watch television anyway, to make that hour a constructive hour and combining the hour of education and entertainment, not just hard skill development. I think that is a strawman.

Mr. NIELSON. That is not what I was talking about. I am talking about educational children's television programs as you are all recommending. I am saying could that not be done through the auspices of the school rather than sending them home to an unsupervised situation at home?

Mr. SINGER. I do not believe they are unsupervised.

Mr. NIELSON. Several have testified that when they go home, the parents are not there; they watch anything that happens to be on.

Mr. SINGER. I have made the point—I believe it is a true one—that to the extent that we can foster a cooperative environment between the school, the home, the parent, and the broadcaster, the better off we will all be. I think that is a given. How you exactly achieve that I am not going to be able to say at this point. But I think it is a given in my mind that if you can involve children and parents even in prime-time viewing hours—many of the materials that we send out to the teacher have a reproducible back page which includes a letter from the teacher to the parent saying we have encouraged the viewing of this program, and we encourage the parents to watch the program with the children, and here are questions that you can ask or discuss after the program is over with your children.

We find a tremendous positive response to that. So I am not——

Mr. NIELSON. You already answered that. Yes, it would help if programs were there, and available, and desirable. The parents and the teachers should cooperate.

Mr. SINGER. That is correct.

Mr. NIELSON. I agree with that. I am not disputing that particular point.

Let me ask another question. Let me ask Dr. Abel this question.

According to my information here, 90 percent of the television viewing takes place Monday through Friday. There is virtually no children's television programing during the week.

Do you have that much viewing by children? Should there not be more television programing? I do not mean "Leave It To Beaver" entirely. I mean good children's educational programs

Mr. ABEL. I think there are a large number of children's programs. For example, when Mr. Fritts testified, I think it was in March of this year before the subcommittee, he reviewed a long list of local-station efforts where there are programs or program segments that are locally produced by local television stations that are aired during the week. As a matter of fact, I would say most of the children's programing produced by local stations is aired during the week and not on the weekend.

So I would not agree that there is no children's programing during the week on local stations. I think there is a substantial amount in all sizes of markets.

Mr. NIELSON. According to the same data, 98 percent of the network children's programs, including cartoons, 98 percent occur on Saturday, yet 90 percent of the viewing is during the week. It seems like the numbers ought to be more adjusted to when the viewing takes place, plus the fact those that are good on Saturday are preempted by sporting events and things of that nature, particularly on the west coast.

Do you not think that is wrong to have the best children's programs available only on Saturday when they are not available during the week?

Mr. ABEL. It is available when children are available to watch, and that is largely on Saturday or Sunday. We assume that during the week children are at school during the week or a portion of that time, and perhaps they should engage or do engage in other activities, extracurricular activities other than watching television. And Saturday is the time that they have free to watch television.

Mr. NIELSON. Let me ask one other question, if I may, Mr. Chairman, and then I will conclude.

I have some concerns about the proposed Wirth bill. I can have concerns on the first amendment basis. I have some concerns about how might be making decisions as to what should be on those programs. There is a fine line between what is educational and what might be ideological or propaganda type programs. In other words, if we are not careful, some of the programs may be designed to promote a particular point of view or a particular philosophy, either to the right or the left—it would not matter which.

I think you need to be very careful that those programs are completely free of ideology.

Would any of you disagree with that statement? Do you have any problems with that statement? If the bill is drawn such that the broadcasters are well compensated for the time spent in this so that the financial matters are not a problem, would the industry object to that program?

I know you object on a first amendment grounds, but if you had some input into what the programing was and if the finances were not a problem, would the industry be opposed to that?

Mr. ABEL. We are opposed to government dictation.

Mr. NIELSON. I was not suggesting dictation. I was suggesting input from the broadcasters themselves and from organizations so the ideology is thrown out, and you have no axes to grind either way.

Mr. ABEL. Then I would say there is children's programing available already.

Mr. NIELSON. But 98 percent of that is on Saturdays.

Mr. ABEL. And most stations, many stations have advisory panels where there are teachers involved in the process of helping the station or advising the station on the creation of programing relating to education in general or relating to education for children.

Mr. NIELSON. I have no other questions, Mr. Chairman.

Mr. PERKINS. Mr. Wirth.

Mr. WIRTH. I thought it would be important for the record, Mr. Chairman, to include in the record at this point the telegram that was discussed by Dr. Abel and to Mr. Biaggi. I might just read that very briefly. I believe the Chairman would be amused.

It says:

> You will soon be receiving a questionnaire from the House Telecommunications Subcommittee, chaired by Congressman Timothy Wirth. Your participation in this is voluntary. Whether and how you reply is strictly up to you. The questionnaire is being mailed to all TV licensees, and we will ask you to supply certain programming data to assist the subcommittee in its deliberations in broadcasting deregulation legislation. While the subcommittee expresses no specific predisposition as to how this will relate to any deregulation legislation, it will probably be used to develop a scheme for quantifying the public interest standard. We recommend several other alternatives, including some which would use existing data which have not been required in the past by the FCC. Unfortunately, our objections to the survey were not wholly accepted. NAB opposed this quantification.

They go on to say that they:

will be diligent in defeating any unacceptable legislation.

If we could include that in full in the record?

Mr. PERKINS. Without objection.

[Testimony resumes on p. 79.]

[The following material were submitted for the record:]

The Amount of Children's Instructional Programming Aired During the 1973-74 and 1977-78 Television Seasons

By Dr. Brian F. Fontes

As part of the 1974 Policy Statement, the Commission encouraged licensees to broadcast more educational/informational children's programs. The purpose of this report is to determine the number of instrumental programs and the amount of time devoted to such programs aired during 1973-1974 and 1977-1978 broadcast seasons.

Method

Utilizing a list of network and syndicated children's television programs aired during composite weeks in 1973-1974 and 1977-1978,[1] the Task Force requested five individuals, knowledgeable about children's television, to identify programs as either non-entertainment or entertainment children's programs.[2] The five

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[1] The Abel study has developed a list of network originated and syndicated programs for the 1973-1974 and 1977-1978 television seasons. A total of 158 stations appearing in 52 markets were sampled. For a complete explanation regarding program selection see Vol. IV. The Amount and Scheduling of Children's Television Programs: 1973-74 and 1977-78 by Dr. John D. Abel. The programs are those that meet the FCC definition of children's programs, plus those programs defined by the broadcast industry as children's programs.

[2] The five individuals are: Dr. Aimee Dorr, Annenberg School of Communications, University of Southern California; Dr. Donald Augustino, Department of Telecommunications, Indiana University; Dr. Charles Clift, School of Radio and Television, Ohio University; Dr. Roger Fransecky, Roger B. Fransecky and Associates, Inc. (broadcast consultants); Dr. Rosemary Potter, reading specialist and TV curriculum writer. These individuals are professionally trained in the study of children and television.

experts were given the list of children's television programs and the FCC classifications and definitions of program types.[3] They were instructed to categorize each program according to the FCC categories. In instances when they could not identify a program, the experts were instructed to answer "DON'T KNOW."

Difference of proportions tests were calculated to determine if differences in amount of instructional programs aired between the 1973-1974 and 1977-1978 seasons were statistically significant. These difference of proportions tests were calculated for network originated programs and programs from syndicated sources, and instructional and entertainment programs. Analyses were based upon those programs having three or more experts agreeing to a classification.

Once instructional programs were identified, comparisons were made between 1977-78 and 1973-74 regarding the average amount of time per station devoted to instructional programs.

Findings

1. Number of Programs. In the 1973-1974 TV season, there were 154 network originated programs and programs from syndicated sources appearing in the 52 markets analyzed in this study. This figure compares with 167 such programs aired during a composite week in the same 52 markets for the 1977-1978 season. Of those children's programs aired in 1973-1974, 40 (26%) were network originated

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[3] FCC Rules and Regulations. §670.

programs and the remaining 114 (74%) were programs from syndicated sources. There was a total of 14 (9%) instructional programs; 3 (1.9%) were network originated programs and 11 (7.1%) were programs from syndicated sources.

In the 1977-1978 season, 34 (20%) of the total 167 programs were network originated programs, while 133 (80%) were from syndicated sources. Of the 167 programs, 15 (9%) were identified as instructional. Of the 15 instructional programs, 3 (1.7%) were network originated and the remaining 12 (7.2%) were from syndicated sources. The following tables present a breakdown for network originated programs and programs from syndicated sources aired in 52 markets during the composite weeks for the 1973-1974 and 1977-1978 television seasons.

Table I is a summary table showing the total number of programs aired during both the 1973-74 and 1977-78 seasons and the number of programs that were identified as instructional.

(Insert Table I here)

Table II presents the degree of agreement among experts for the classification of network originated children's instructional programs aired during 1973-1974.

(Insert Table II here)

Table III presents the degree of agreement among experts for the classification of network originated children's instructional programs aired during 1977-1978.

(Insert Table III here)

Table IV presents the degree of agreement among experts for the classification of children's syndicated instructional programs aired during 1973-1974.

(Insert Table IV here)

Table V presents the degree of agreement among the experts for the classification of children's syndicated instructional programs aired during 1977-1978.

(Insert Table V here)

2. Average Amount of Time Per Station Devoted to Children's Instructional Programs.[4] The data in Table VI indicate that there was no significant difference between 1977-78 and 1973-74 in the average amount of time per station devoted to children's instructional programs. During the composite week in 1977-78, licensees aired an average of 2.6 hours of instructional programs compared with 2.8 hours during the 1973-74 composite week.

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4 The analyses do not include local children's programs due to the fact that the five experts were unfamiliar with the majority of local programs. Short educational inserts, such as Metric Marvels, In the News, and Schoolhouse Rock, were also not included in the analyses. In 1973-74 NBC did not air educational inserts, while in 1977-78, NBC aired Metric Marvels for approximately twelve minutes during the weekend. ABC aired approximately seven educational segments, Scholastic Rock, per weekend for total of approximately twenty-one minutes, in 1973-74 and approximately the same amount (minutes) during 1977-78. CBS's educational insert, In the News, aired eleven times per weekend during 1973-74 for a total of approximately twenty-two minutes. During 1977-78, CBS aired approximately 24 minutes of educational inserts during their weekend children's programs.

(Insert Table VI here)

Further analyses indicate that there were no significant differences between 1977-78 and 1973-74 for network originated instructional programs and such programs from syndicated sources. In 1977-78, the average amount of time per station devoted to network originated instructional programs was 2.76 hours compared 2.77 hours aired during 1973-74. On a per station basis, instructional programs from syndicated sources were aired, on average, 1.1 hours in 1977-78 compared with an average of 1.4 hours in 1973-74.

(Insert Table VII here)

Conclusions

The data indicated that there were no statistically significant differences in the proportion of network originated instructional programs and programs from syndicated sources between the 1973-1974 and 1977-1978 television seasons. Although there were more instructional program titles in 1977-1978, the proportion of instructional programs to total programs was less than the proportion of instructional programs aired during the 1973-1974 season. The average amount of time devoted to network originated instructional programs essentially remained the same during the two broadcast seasons and the same was true for instructional programs from syndicated sources.

TABLE I

THE NUMBER AND PROPORTION OF NETWORK ORIGINATED AND SYNDICATED INSTRUCTIONAL PROGRAMS

	Total No. of Programs	No. of Instructional	Proportion Instructional	z	Significance
A. Network Originated Instructional					
1973-1974	40	3	.075	z =.210	N S
1977-1978	34	3	.088		
B. Syndicated Instructional					
1973-1974	114	11	.096		
1977-1978	133	12	.090	z =.108	N S
C. TOTAL Instructional					
1973-1974	154	14	.090		
1977-1978	167	15	.090	z =0.00	N S

TABLE II

AGREEMENT AMONG EXPERTS ON NETWORK ORIGINATED ENTERTAINMENT AND INSTRUCTIONAL CHILDREN'S PROGRAMS, 1973-1974

Network Shows Total = 40 Total Agreement: (5 out of 5)	n	% of Total	% of Sub-Total
entertainment	23	58	100
instructional	0	—	—
don't know	0	—	—
TOTAL	23	58	100
4 out of 5 agreement			
entertainment	6	15	55
instructional	3	8	27
don't know	2	8	18
TOTAL	11	28	100
3 out of 5 agreement			
entertainment	4	10	80
instructional	0	—	—
don't know	1	2	20
TOTAL	5	12	100

One program had less than three experts agreeing, or 2 percent of the 40 programs.

TABLE III

AGREEMENT AMONG EXPERTS ON
NETWORK ENTERTAINMENT AND INSTRUCTIONAL PROGRAMS
1977-1978

Network Shows Total = 34			
Agreement: 5 out of 5	n	% of Total	% of Sub-Total
entertainment	20	59	95
instructional	1	3	5
don't know	0	0	0
TOTAL	21	61	100.0
4 out of 5 agreement			
entertainment	6	18	86
instructional	1	3	14
don't know	0	0	0
TOTAL	7	21	100.0
3 out of 5 agreement			
entertainment	3	9	50
instructional	1	3	17
don't know	2	6	33
TOTAL	6	18	100.0

TABLE IV

AGREEMENT AMONG EXPERTS ON SYNDICATED
ENTERTAINMENT AND INSTRUCTIONAL CHILDREN'S PROGRAMS
1973-1974

Syndicated Shows Total = 114			
Total Agreement: 5 out of 5	n	% of Total	% of Sub-Total
entertainment	43	38	72
instructional	7	6	12
don't know	10	9	17
TOTAL	60	53	101
4 out of 5 agreement			
entertainment	11	10	46
instructional	1	1	4
don't know	12	10	50
TOTAL	24	21	100
3 out of 5 agreement			
entertainment	10	9	34
instructional	3	3	10
don't know	16	14	55
TOTAL	29	26	99

One program had less than three experts agreeing, or 0.88% of the 114 programs.

TABLE V

AGREEMENT AMONG EXPERTS ON SYNDICATED ENTERTAINMENT AND INSTRUCTIONAL CHILDREN'S PROGRAMS 1977-1978

Syndicated Shows Total = 133			
Total Agreement: 5 out of 5	n	% of Total	% of Sub-Total
entertainment	60	45	78
instructional	6	5	8
don't know	11	8	14
TOTAL	77	58	100
4 out of 5 agreement			
entertainment	6	5	26
instructional	3	2	13
don't know	14	10	61
TOTAL	23	17	100
3 out of 5			
entertainment	14	10	50
instructional	3	2	11
don't know	11	8	39
TOTAL	28	20	100

Five programs had less than three experts agreeing, or 4 percent of the 133 programs.

TABLE VI

AVERAGE NUMBER OF MINUTES PER STATION PER WEEK
DEVOTED TO INSTRUCTIONAL CHILDREN'S PROGRAMS
(STANDARD DEVIATIONS) (n=151)

1973-74	1977-78	Significance
169.4768 (145.229)	153.2781 (144.249)	t =1.48 p =.140(2-tailed)

TABLE VII A

AVERAGE NUMBER OF MINUTES PER STATION PER WEEK
DEVOTED TO NETWORK INSTRUCTIONAL CHILDREN'S PROGRAMS
(STANDARD DEVIATIONS) (n=86)

1973-74	1977-78	Significance
166.3953 (150.996)	165.6977 (151.491)	t =.07 p =.943 (2-tailed)

TABLE VII B

AVERAGE NUMBER OF MINUTES PER STATION PER WEEK
DEVOTED TO SYNDICATED INSTRUCTIONAL CHILDREN'S PROGRAMS
(STANDARD DEVIATIONS) (n=131)

1973-74	1977-78	Significance
85.1908 (99.120)	68.1298 (82.248)	t =1.68 p =.096 (2-tailed)

Mr. WIRTH. I thank the members of the panel for being with us today and for the cooperation of all of you in being here.

Thank you, Dr. Abel, and we appreciate your input, and I am sure the record will be kept open, and we look forward to working with you.

Thank you very much.

Mr. PERKINS. Mr. Edwin Cohen, we will hear from you first.

STATEMENTS OF EDWIN COHEN, EXECUTIVE DIRECTOR, AGENCY FOR INSTRUCTIONAL TELEVISION, AND CHAIRMAN OF THE BOARD, JOINT COUNCIL ON EDUCATIONAL TELECOMMUNICATIONS, EDWARD J. PFISTER, PRESIDENT, CORPORATION FOR PUBLIC BROADCASTING; GERALD LESSER, GRADUATE SCHOOL OF EDUCATION, HARVARD UNIVERSITY; AND WILLIAM F. BAKER, PRESIDENT, TELEVISION GROUP W, WESTINGHOUSE BROADCASTING AND CABLE, INC.

Mr. COHEN. It is very appropriate that these two subcommittees are meeting together, because I represent an activity that can only be understood by the concerns of the two committees—namely, television as it is used in education.

As you in particular are aware, coming from Kentucky, television has been used in the school, in the classrooms, for about 20 years, with, I think, notable success in many places. Generally, the programing is offered as——

Mr. PERKINS. Did you say most success in most places?

Mr. COHEN. I said generally with notable success in the Commonwealth of Kentucky and in several other States. I say that with qualification, because the statistics, I think, as you are aware, are that one-third of all of our students in public schools make regular use of public television during the normal school week. They will on average receive one or more programs that are used with the ordinary teaching.

The point I would make is that while it has taken us 20 years of Federal help, foundation help to create the delivery system, to create the receiving equipment, we have two-thirds of our elementary and secondary students who are not regular users of television in the schools. You can look at that either way. It is a question.

The fact here is that this is television that is supported by the State and local education agencies. These agencies pay for and indeed are the sponsors for this material. As a consequence, the material relates to what the schools are doing, and it has broadened the things that the schools can do. In particular, it has provided a way that the schools can introduce new subject matter such as economic education, such as the concern for critical thinking and problem solving. These are things that the schools ordinarily would take about 30 years to accomplish in the way of change that they have been able to do better and sooner because of television.

In some places, such as California, it is not possible for schools to offer a full curriculum in areas such as the arts, for instance, and the only exposure the schools can provide to this area of the curriculum has been and is through television. This perhaps is a regrettable commentary about what the schools have had to elimi-

nate, but it points up what telecommunications can restore, and I think underscores the merit of this hope for television in education.

We are now looking at, as has been repeatedly pointed out, a concern for improving and changing what we do in sciences education, what we do in mathematics education, what we do in foreign language education. These are, without debating the point, matters of national concern and have been given national priority. It would seem that here, too, television has an opportunity of assisting, of accelerating the way that these areas can be strengthened.

So, I guess the bottom line is, what, if anything, can the Congress do to increase the contribution of school television? I would answer that by saying that one thing is to encourage the greater use of what we already have. By that, I mean the television programs do not age. They are like commercial television. They can be rerun, the average life being from 10 to 12 years of moving the one-third that do see it perhaps to a half or better, which is pretty good for education.

Second, one of the barriers to the increased use of television has been the lack of familiarity that teachers have of integrating television materials into their teaching, into the area of teacher training, which is one that at least exploration by the Congress would be useful in.

More importantly, I think it is possible to stimulate the development of more classroom television programing. The funds that State and local television agencies have are stretched to the limit. As everybody knows, it costs considerable money to develop appealing television programing that is at the same time instructional and useful.

Some kind of shared arrangement where the States can look to and the local television agencies can look to new sources of funding would be a way on the one hand of increasing the quality of what the schools can offer in television, and second, at the same time, preserving the curriculum control that the schools must have over their own material.

Congressman Biaggi was concerned about the role models that television can play. Here the textbook industry and those concerned with school television have been very active over the past decade working with education to develop the guidelines and the models of what they should or should not put in programs. But this again is the governance, the control question of when the material is to be used in the schools, and the control ought to be in the hands of those responsible for education, namely, the educators.

Finally, there is a—and this is almost a technical point, but I guess we live by technicalities. Finally, one of the difficulties educational television in the schools has had over the past two decades has been that any moneys that Congress has appropriated that has had anything to do with television programing for the schools indicate when the regulations come out that these moneys can only be used for purchasing or leasing off the shelf items, and the schools really do not have that luxury.

Television program development has not been an area that is economically feasible for commercial activities, so nobody makes these programs except educators, and without the money to develop the programs, programs do not exist, and yet if Federal assist-

ance is to be useful, it comes after the fact of creation. So we get this awkwardness.

That is really all I wanted to say, Mr. Chairman.

Mr. PERKINS. Let me thank you. We will get back with you later.

Mr. Pfister, president of the Corporation for Public Broadcasting. Go ahead.

STATEMENT OF EDWARD PFISTER

Mr. PFISTER. Mr. Chairman and Mr. Chairman, all public and educational broadcasters and, I believe, parents, teachers, and children at home and in school welcome this opportunity to be with you today to discuss this matter.

I especially want to bring the greetings of CPB's directors and all the public educational broadcasters who for years have shared your commitment to children through the use of television and other technologies.

For the second consecutive year, CPB has reaffirmed children's programing as its No. 1 priority in the programing area. As I have said, all public and educational broadcasters accept and have always accepted a special responsibility to address the needs of the Nation's children. Public television's record, indeed educational television's record in television programing is second to none.

On behalf of public broadcasting, I should like briefly to present a proposal to you today. With your permission, I should like to provide additional information to expand this proposal for the record.

The proposal is based on the experience we have had with children's and educational programing over the last 20 or 25 years, and particularly over the past decade. That experience is rich with success. It includes programs like "Sesame Street," "The Electric Company," "Mr. Rogers' Neighborhood, Studio SEE, Zoom," a new series entitled "Reading Rainbow," "Community of Living Things," "Think About," all of the work coming out of Mr. Cohen's agency in Bloomington, Ind., and countless series that mean so much to children around the United States produced by public and educational broadcasters locally.

That experience also includes after school use of programs like "The Shakespeare Plays," "Great Performances," the "National Geographic" specials, and others. Public television serves millions and millions of children at home and in school. We wish and we hope to continue to serve those children and to add more and more children to that list. In fact, this accomplishment is our proudest. We are born out of the side of American education, and we are pleased to continue to participate in the educational process.

Thirty percent of all public television broadcast hours are educational hours for children in this country. That is an amazing statistic for me, and it always has been, particularly in trying economic times.

Against that brief background, I would briefly like to outline a proposal.

One, help us find the way to produce more new programs for our successful efforts, especially "3-2-1-Contact," the highly regarded science series that has been discussed at the table this morning,

and "Reading Rainbow," a new series designed to motivate youngsters to keep reading.

Two, initiate a major research and subsequent production effort in mathematics.

Three, motivate major continuing efforts to develop new school television materials such as those described briefly by Mr. Cohen in terms of the work he has been doing with State agencies and public licencees across the country.

Four, expand and refine existing educational materials wherever it is worthwhile to do so.

Five, initiate efforts to research and produce remedial materials necessary for young people who want to pursue higher education degrees and need just one more nudge in that direction.

Six, begin the development of full public cable services for children in the United States.

Seven, fund continuing research into the wisest educational use of the new technologies, including video discs, discs themselves—I am sorry—video text, discs themselves, and computers.

In our view, this proposal will help us to be helpful to our children, to teachers, and to parents. It will enable the wisest use of television on behalf of our most important asset, our children. Had not our appropriations been so severely cut in 1982, I am persuaded that public and educational broadcasting would be well on the way with most of the elements of this proposal.

We want to be helpful, and again, in our view, the cost is not very great, particularly when measured against the potential gains and risks which have been outlined here this morning. In addition to CPB's current appropriation, we estimate a need for $30 million more annually to do the job as the job must be done. That in fact is less than $1 per year per using child, teacher, and parent.

Television can be, and we know this from our past experience in a variety of ways outside of the classroom and in the classroom, a great help in achieving the Nation's educational goals. With the kind of emphatic commitment we hope you will make, television certainly will be more helpful than it has ever been, and we want to tell you, both of you, that we very much appreciate your initiative to improve the quality and the quantity of programing available to children.

Television is an authoritative instrument, and no one in public broadcasting doubts that its authority will continue for some years to come in the lives of all of our people.

Thank you.

Mr. PERKINS. Thank you.

Mr. Lesser.

STATEMENT OF GERALD LESSER

Mr. LESSER. Thank you, Mr. Chairman, Mr. Wirth. I am Gerald Lesser from Harvard University. Those of us who study the effects of television on children and in particular its potential educational benefits find ourselves in a very paradoxical position. As the research more and more convincingly demonstrates the power of the medium, we see it being used less and less to achieve the educational benefits.

This is not to say that the convincing results of research have caused the commercial stations to abandon children or that they listen to researchers at all, but it almost seems that the more we discover from research and programing experience, that television could be doing good things for children, the less we do for them. We have now reached the point where what the commercial stations provide for children, except for Saturday morning cartoons and occasional specials, is virtually nothing.

It is more than paradoxical. In a country that places high value on its children and yet finds it difficult to mobilize the resources to educate them effectively, our failure to use one of the most powerful resources is a disgrace. Overshadowing all the other facts about children and television is that there is not a single, daily, regularly scheduled, weekday program for children on commercial television stations in this country. I assume that is a condition that Representative Wirth's bill is meant to remedy.

In Great Britain 12.5 percent of the total broadcasting time is devoted to programs especially designed for children. Sweden allocates 12 percent, and it is no surprise that Japan has a greater number of programs for children, designing some of them for children's viewing alone, many others that are to be viewed with a parent or an older sibling, and still others that are designed for parents to help them understand their children's development.

In the United States, commercial stations, except for those Saturday morning cartoons, provide none. Well, what do we know that television could deliver if we only cared enough, if we began to take television seriously as an education resource, and if we began insisting that the commercial stations take their obligations to children seriously? I am just going to outline a few points without elaboration.

One, we know that television can teach a wide range of skills and behavior. Some of those were alluded to this morning. This conclusion emerges clearly from psychological and educational research.

Second, beyond teaching skills and behaviors, we also know that television can motivate and interest in what children need to know and learn.

Third, we know that television can simultaneously both entertain and educate, again, a point raised this morning. Often entertainment and education have been regarded as separate, but television forces us to acknowledge that entertainment need not be empty of educational value, and that education need not be unentertaining. We are now discovering how to make entertainment instructional and how to make learning a source of excitement and joy.

Fourth, we know that viewing by siblings and parents increases the learning about both the world as it is and the world as it might be. But we also know that television in its present form, does not even come close to achieving this. There are no commercial television series specifically designed for children. What do they watch? Well, except for the series produced for children on public broadcast stations, and those are limited to "Sesame Street" and "3-2-1-Contact" and "Reading Rainbow," as Mr. Pfister mentioned, they watch what we watch as adults. That is all that there is.

And what do we and our children see? Well, most of what we and our children see on television is catastrophic, sick, it is unhappy, or chaotic. The world of television portrays a world of cops and robbers, inane comedies, of superheros, and fantasy space adventures, and mindless cartoons, and it is a world that is at least slightly out of its mind. These are not the issues that most of us want our children to be nourished by.

What we would ask of television is show our children interesting things about the world that they have not seen before and probably would not have a chance to see without the benefit of television. It could bring them sights they have never seen, sounds they have never heard, people and ideas that they have not yet imagined. It could show our children how things work, how other people use them, what goes on in the world, and how to think about it.

This does not seem to be asking a lot, yet television has not yet begun to deliver on its promise to children to show them the persons, places, and things of this world and what is basic in human life. Television can inform children and create visions of what their lives can be.

The potential for our children was best described by Edward R. Murrow some years ago. He said:

> This instrument can teach, can illuminate, yes, it can even inspire, but it can do so only to the extent that humans are determined to use it to those ends. Otherwise, it is merely lights and wires in a box.

Thank you, Mr. Chairman.

Mr. PERKINS. Thank you very much. Now we will hear from you, Dr. Baker.

STATEMENT OF WILLIAM F. BAKER

Mr. BAKER. First, I would like to thank you, Mr. Chairman, and Mr. Chairman, for having me here today, and I would like to comment on what some of the other panelists have already said. I strongly agree with their positions, what they have said and what you have said. There is a long way to go in this area, and I am grateful that the Congress of the United States is looking at it. Let me review my formal remarks, and then we will talk about some other things.

As a parent and a former educator and a person deeply involved in our changing communication technology, I appreciate the opportunity to appear this morning.

The education and preparation of our children for productive and rewarding lives in a world which is rapidly changing and the role which the electronic video media plays is a vitally important topic for the future of our society. The combination of expertise of the kind of people represented by the two subcommittees and by my copanelists are a bold and necessary approach for the next decade to deal effectively with this problem.

Let me begin by restating Group W's interest in this area. We at Group W have had a longstanding commitment to the greater use of the electronic video media in serving the educational and developmental needs of our children. As an important source of information and entertainment, we believe that the electronic media have an important role to play in the educational and intellectual devel-

opment of young people. This role is, if anything, becoming more important today because of our changing technological environment and increased importance in the electronic media in the dissemination and interchange of information.

Whether we like it or not, our society is moving into an age where the electronic video screen probably will be of at least equal importance to the traditional printed page as the means by which people, specifically children, will communicate and receive information.

You have probably noted that I have not used the traditional term "television." Our present commercial and public educational over-the-air television system has a very important role to play, and we have been talking about that a lot this morning, in serving the educational and developmental needs of children. I hope the Group W stations, for example, have done some good work in that area, a high degree of locally produced programs, among others designed for children.

Each Group W television station produces a regular, weekly, local program designed specifically for young people and offers at least four prime-time specials produced by it or another local Group W station each year. Group W television stations produce public service announcements, PSA's, designed expressly for young people on such topics as nutrition and health habits. These PSA's are made available to other Group W stations for broadcast.

We have done things such as the "Kids' Fair" in Boston, where we stimulated youngsters and parents in Boston in huge numbers, including, I heard, 200,000 people.

We apply special time and content commercial message standards to programing designed for children in view of the special nature of the younger audience. Those are just a few of the things we have done. They are not enough, we admit. There must be more. We at Group W are proud of our efforts in this field, and believe that television stations have an important role to play in the future.

I should mention some work done by the commercial and public networks. Shows like "Sesame Street" and "3-2-1-Contact" are, of course, outstanding examples. However, it must also be recognized that our over-the-air television system is no longer the only ball game in town. In examining the most effective use of the video medium for children, our focus must also include a broader range of video alternatives now available or being developed, including cable television, a business we at Group W are heavily involved in, video cassettes, satellite program distribution, use of local microwave systems, and other delivery systems.

These new technologies, in my opinion, also hold great potential for serving the educational and developmental needs of the young in a meaningful fashion. As an example of what is possible, consider the following examples. First, in the area of satellite delivery programming for cable-television-system use, an organization called the Learning Channel here in Washington is now delivering a varied schedule of learning programs to over 250 cable television systems serving approximately 3.5 million subscribers.

While this service, which includes a variety of personal enrichment programs, including teacher inservice programs for secondary

school teachers and administrators is more directed to adults, there is no reason why similar services could not be successfully developed for children, and the children's cable television service, Nickolodeon, and the Disney Channel have already made unique contributions in this area.

The special opportunities afforded by the domestic communications satellites plus the substantial channel capacity of cable television systems are particularly suited for this specialized and concentrated type of service to the public.

Second, the distribution by microwave of video programing within communities is now a quite promising area. In the educational area in particular, a substantial block of spectrum has been allocated by the FCC to what is known as the instructional television fixed service, or ITFS for short. While this service has been in existence since 1963, it has yet to achieve its full potential, and I believe is just coming of age as an important educational and informational distribution technology.

To give you an example of its potential, Group W is now cooperating with George Mason University in northern Virginia in a test program involving the use of Group W's satellite news channel service. Under the program, our news service is transmitted by the George Mason University ITFS system to a number of Washington area secondary and university level schools for inschool educational and training purposes. The service is also available to others who have an ITFS reception capability for their benefit, and I believe it demonstrates the innovative uses to which ITFS facilities may be put in serving educational needs, specifically including those of children.

In my opinion, these examples amply point out the promise which the future holds in the technologically changing telecommunications area. Our responsibility as educators and communicators is to meet the challenge presented by these new technologies with innovative and effective services for children.

Thank you.

Mr. PERKINS. What are the objections of the networks to the Wirth bill?

Mr. BAKER. Mr. Chairman, I cannot comment since I am not a television network. I wish I were, but I am not. I am not a television network and I cannot comment on their position since I do not know.

Let me just tell you that I think Chairman Wirth and others have made an effective contribution in addressing themselves to these important issues. It is a complicated issue, and it is one that we have to look at carefully. It is something that must be done, but exactly how to frame it presents, we admit ourselves, difficult problems, but I think Chairman Wirth said it best, and I stand up there alongside of him when I say this is an area that we must creatively work together on.

Mr. McGannon, our former chairman of Group W Westinghouse Broadcasting & Cable, said that broadcasters should do it without Government intervention, but if they fail to act, it was his feeling that 1 hour, particularly that at prime time, is something you should look at.

That is to say, if there is to be such a look at this legislation, consider a time period when it is programed all at one time so that people cannot go drifting off to "The Dukes of Hazzard" on a competitive television station. Everybody at one time should be doing the same thing. It would force the quality up. And I would look at the possibility of prime time, where the big audiences exist, which is programed by the networks.

There are a lot of tremendously creative people in the television business. We have not marshaled our forces, our creative forces, adequately in that area, in my view. One of the things I think is that we at Group W have done a good job—but everybody can do a better job, even us. One of the things we are looking at is taking the broad view: for example, the "Kids' Fair" that we have done in Boston. We are also looking at the entire gestalt of education in our communities. A number of our television stations are going to be focusing on the educational process in the community itself and by being an activist, a proactivist, in that area, trying to do something.

There is so much that needs to be done. If anybody knows it, it is you folks, who are addressing one of the major problems in our culture today, and that is education. Those of us at Group W want to get behind you and help you deal with those issues. I support efforts to look at these issues, and we want to creatively address them with you. It is a difficult issue, and we certainly believe in the issue of operating under the public interest standard. That is what this is about, and that is where we stand.

Mr. COHEN. If I could interject, Mr. Chairman, I have a 12:30 flight to catch, and I would appreciate being excused, if that is possible, unless you have a question to direct to me.

Mr. PERKINS. You had better leave now. Thank you very much. Go ahead, Mr. Wirth.

Mr. WIRTH. Thank you very much, Mr. Chairman. I want to thank the three of you. Mr. Pfister, I am interested in your suggestions on the seven specific items that ought to be in a piece of legislation or ought to be supported. I was hoping that perhaps we could get your able counsel to draft those up in a legislative form which we might distribute to our panelists and to our subcommittees for their reaction, and perhaps get moving. I thought it was a very, very constructive and productive approach.

Mr. PFISTER. Thank you, Mr. Chairman. I will ask her to do that.

Mr. WIRTH. Could you do that? And we will get back to Dr. Lesser, and Dr. Baker, and now Dr. Rubinstein, and all the members of the two subcommittees, and so on, and get reactions. Let us get going on this issue. That is the substance of what we are trying to do.

Mr. PFISTER. I appreciate it.

Mr. WIRTH. Dr. Lesser, I appreciate—I guess I am a little gloomy, in fact, about your comments. First of all, Lesser's paradox. I understand the research shows an increasing power of television as a teacher, and yet television is being used less and less as a teacher. Is that Lesser's paradox?

Mr. LESSER. That is a paradox.

Mr. WIRTH. Is it not terrible that we come back and use words like "catastrophic," "sick," "mindless," "chaotic?" There is a whole

lexicon of gloom that you used that certainly runs contrary to the experience of this country, which is one of hope and cooperation, and again, educating our young for a future which is better than the past.

Mr. LESSER. Yes; I think this morning Mr. Nielson mentioned that given the little there is on television specifically designed for children, most children watch what is on. They watch what is developed and constructed for adult viewing. When the kids are home from school, what we are talking about are soap operas, reruns of situation comedies. I do not think the adjectives I have used about "sick" and "catastrophic," "unhappy," "slightly out of its mind," are exaggerations of what you see on that programing and what our children share with us in our viewing.

Mr. WIRTH. Then we get to the question of where do we go from here. I think Dr. Baker hit it just right, that there may not be—I do not think that there are one, two, three, five specific solutions that will magically get us through this, but it will require precisely the kind of cooperation that you were talking about, Dr. Baker.

Mr. BAKER. We are willing to help.

Mr. WIRTH. I know you are. When I was a freshman Member of the Congress, I got my first lesson in responsible broadcasting from Mr. McGannon, the former chairman, who came in and was a breath of fresh air, as you have been this morning. I think I can say all broadcasters are not characterized by the phrase: "Ask what you can do for the broadcasters, not what we can do for you." You are on the other side of that, and that is very welcome indeed.

Let me go back to the question that Chairman Perkins asked, which I think gets us again into how do we work our way through this? One of the major critiques of any action being taken by the Federal Government is that somehow this is an abridgment of the first amendment. How do you come back, Dr. Baker, and say we would like to work with you? Mr. Pfister, you have been involved in this as a broadcaster. Dr. Lesser, you are an academic looking at this. How do we quickly—I happen to agree with Mr. Biaggi that that is a "bogus smokescreen." But how do we answer that in a clear fashion so that we then can again go on and work cooperatively rather than hiding under the obfuscation of the first amendment "smokescreen?"

Mr. PFISTER. I happen to endorse Mr. Biaggi's point of view, Mr. Wirth. I think that the potential to be gained, in one way or another, by finding a way to get commercial broadcasting—which is where the audiences are although we are creeping up on them slowly but surely—I just think it is so terribly important that it must be done, and, frankly, I see no argument of principle there at all.

As you know, I sometimes get involved in first amendment debates.

Mr. WIRTH. Yes; we have had that debate on other occasions. Dr. Baker.

Mr. BAKER. I am not a lawyer.

Mr. WIRTH. I am not, either.

Mr. BAKER. I am speaking without benefit of counsel, except but to say that it strikes me, besides those of us in broadcasting having first amendment rights, the children of America have first amend-

ment rights, and all I can say is, I am a human being and a concerned broadcaster who wants to use this very powerful medium in the best possible way we can.

We are also businessmen, and we want to earn an honorable profit for our stockholders. There is a way to do all of those things at the same time, and that is what we think we can address. It is not easy. There are no simple solutions, but we want to work on it together. There has got to be a way. In this country we can find a way. I know it will not be easy, but we will do it.

Mr. WIRTH. Let me say, Dr. Baker, I think that is a fabulous answer—a really good answer.

Mr. LESSER. My response echoes Mr. Baker's. That is, children also have first amendment rights. They are very small. They are very short. They do not have a lot of money. It is very hard for them to represent themselves. I think somebody has got to represent them in their first amendment rights.

Mr. PFISTER. Mr. Wirth, could I just add a point? If indeed this does happen, and, given the support that your notion has received, I suspect there is a good chance that it would happen, I would ask you some place in the report surrounding the legislation to make the suggestion to our commercial colleagues that they give us post-broadcast rights, because we can then put those programs into the school.

Mr. PERKINS. Thank you very much.

Mr. Nielson.

Mr. NIELSON. I am sorry I was not able to be here for the testimony, because I was at another subcommittee but I would like to address Mr. Pfister particularly. Your testimony seemed to emphasize that the main solution to your problem was increased funding in public broadcasting. That seemed to be the main thing that came through. Are you familiar with the bill that is currently before the Congress that just passed through the Energy and Commerce Committee?

Mr. PFISTER. Yes, sir, I am.

Mr. NIELSON. Do you have a strong position paper on that particular bill?

Mr. PFISTER. As strong as we could make it.

Mr. NIELSON. Would you send me a copy?

Mr. PFISTER. Certainly. We need all the help we can get.

Mr. NIELSON. What about the comment that was made by the ranking minority member of the committee that said, why should we increase your funding considerably when all other broadcasters are pulling in their horns a little bit? What about that comment?

Mr. PFISTER. Our funding had its horns pulled in considerably in 1981 in the Reconciliation Act. Our funding across the country, because less than 25 percent of public broadcasting funding comes from the Federal Government, has been being decreased or has been being destabilized. We have not had an increase in terms of ability to purchase since 1978. That is to say, public broadcasting was standing still when public broadcasting in 1981 was asked to take more than a 20 percent cut, then more than a 25 percent cut in the current year in the Federal money.

Mr. NIELSON. Are you talking about cuts from the previous year's budget?

Mr. PFISTER. Yes, sir, cuts from previous year's appropriations.

Mr. NIELSON. In Congress, we define cuts in a variety of ways.

Mr. PFISTER. This is a cut in direct appropriations, Mr. Nielson. The answer is, I appreciate that the commercial networks may be making cuts. I also appreciate that they are making money. Their profits are not slipping very badly. For that I am pleased. I think it is wonderful for commercial organizations to make money.

I do not think it is accurate to say that public broadcasting is asking for more while our commercial colleagues are indeed cutting themselves back. We have been cut back across the country because our organization is funded by the Federal Government, in minor part by State governments, local governments, and by a whole host of entrepreneurial activities, and as the economy sucks in, everything sucks in around us.

Mr. NIELSON. I have one final question on that. Do you believe we could increase your funding through private means, through more tax incentives, things of this nature? Do you think that is a possibility?

Mr. PFISTER. Not in the foreseeable future. We have just concluded a major study which the Congress asked public broadcasting to conduct through a commission called the Temporary Commission on Alternative Financing. We studied every possible alternative over an 18-month period. While we see some chance for slight additional revenue in some of those areas, commercial areas or entrepreneurial areas, the fact is that it will only be supplemental and only very modest in the foreseeable future.

Mr. NIELSON. One last question. When I was commissioner for finance we found that the State legislature was very, very receptive and was very generous to KUED. Have you tried to maximize your strength among the State governments, to get them to participate more?

Mr. PFISTER. As much as we can. As a matter of fact, the group of broadcasters who are the management people in charge of all of the State licensed organizations in the country are meeting in Memphis today and tomorrow to try to find ways to push their States harder.

Mr. NIELSON. What I am trying to say is, there are more sources of new revenue besides the Federal Government—State legislatures and more private——

Mr. PFISTER. We understand that, sir. We are pushing them very hard.

Mr. NIELSON. I do not have any other questions of you, but I do have a general comment. I am not familiar with Group W broadcasting. I was impressed by your statement, Dr. Baker. I hope you can get more broadcast time available. I think that would be very good, and I wish you were a network, frankly.

I would like to see more educational television as a way of life. I would like to see the public broadcasting have a little more prime time broadcasting, but I would like to also see the commercial people get into the act. I think it is something all of you can participate in.

On the comment Dr. Abel made earlier today about the first amendment right, do you feel it would be an unnecessary intrusion or an unwise intrusion on their perquisites to suggest that they

devote 1 hour each day of prime time for educational television? Is that an invasion of their rights, in your view?

Mr. BAKER. As I say, I am not an expert on that. I believe in the first amendment rights of everybody in the United States of America. I think we have to look at the quantity of programs being addressed to the youth of America, to the children of America, but we also have to look at the quality.

I also would like all of us to focus, too, on some of the other things we talked about today, which are and include the other media available. We are also heavily involved, besides being the licensee of six television stations, five VHF TV stations, one UHF station, we also serve approximately 2 million cable television households in the United States through our company, Group W Cable.

We think we were one of the stimuli, or at least we were involved in the very beginning with trying to get the Disney channel started, and as a cable subscriber myself in Connecticut, I know that my children spend a lot of time watching Nickelodeon, and I am delighted they do that. It shows good taste on their part, I think.

So, I think, let us look at the wide range of things, and let us also consider some of the things that my former chairman, Mr. McGannon, said. Let us look at prime time. Let us look at people doing it all at the same time so there are not different places for people to go. And as a private supporter and as a public supporter of public television, one of the things I think should be stated on behalf of my colleagues in public television, too, is that while they need money, every dollar that is given to them not only winds up in some good programing but also stimulates the people on my side of the business, the commercial side of the business, because the folks from public television who do a good job can get the other institution, the commercial institution's gears going, and can stimulate us into doing better programing, and certainly I am not afraid to make and push our business harder. As I say, I am pushing all of our television stations, and I think some of the things we have done are outstanding, and I want to make sure we keep that level up there.

Mr. NIELSON. One brief comment in connection with Professor Lesser's comment. You mentioned the children's first amendment rights. I do not know what the implication of that remark was. Was it saying they have a right to seek good quality entertainment and good quality television, and not be exposed to a lot of trash?

Mr. LESSER. That is precisely the implication.

Mr. NIELSON. You go along with Ms. Baisinger's comments this morning when she said most of the time is spent on things that have nothing to do with children, they are up at midnight, and so forth?

Mr. LESSER. You commented this morning that 98 percent is so allocated. I would agree with that estimate.

Mr. NIELSON. I have seven children, a typical Utah family. My first four children did not have the option of television, because we refused to buy a television set. I could afford it, but I did not intend to have a television. For the last three children, however, we relented, and while I do not want to make comments about which

children are the best in school, it is not entirely related to that, but those who enjoy reading and enjoy other pursuits are more inclined to be in the first four who did not have television, than the last three, who have television. You can draw your own conclusions from that.

I think television has a lot of good. I think it also has a tendency to waste a lot of time, has a tendency to divert from the art of conversation, the enjoyment of reading, things of this sort, things that are very important. I think anything you can do to improve the educational quality and make it desirable and net positive I would support.

Mr. PERKINS. Mr. Biaggi.

Mr. BIAGGI. Thank you, Mr. Chairman.

I was not here when the telegram that was sent out by the National Assocation of Broadcasters was introduced in the record by my colleague, Mr. Wirth, but it reinforced my original statements. Clearly, what is happening, at least from that view, is an adversarial position is being created. That is unfortunate, because we listened to the other witnesses on our first panel, and we listened to the witnesses now on this panel, and we all have a common concern, and it is positive.

Dr. Baker's response to Dr. Wirth as to what could be done is classic. Really, what we are talking about is making government work. This is the process. We believe we have a problem. It is a national problem. When you have a national problem, it touches all, and we reach out to the resources of our Nation, which are reflected in your expertise, to a large extent. Then we cull the wheat from the chaff and hopefully distill the testimony to a point where we can produce a legislative product that is acceptable to the people and is responsive to the need.

So, Dr. Baker, I cannot commend you sufficiently for your enlightened attitude, and Dr. Lesser for pointing out very graphically the trend of the country with relation to television and its utilization, and when we talk in terms of first amendment, we can argue that, as I said before. It is reinforced again. I do not think we should rely on it.

I think we have an obligation to deal with our moral responsibility, and it is doable. That is the American genius. If we apply ourselves to the problem, we will provide the resolution. We have done it since the beginning of our Nation. It might sound like a "rah, rah" statement, but it is a fact. It is undeniable. We have been confronted with even more difficult, complex problems. We have done it together.

That is why I take a very dim view of the attitude and testimony of Dr. Abel, and very frankly, in this Member's mind, his presence and his testimony is diminished, and I sincerely hope that they review their position and take another attitude, be more constructive, because in the end we are dealing with the future of our Nation.

We are not simply talking about children and isolating it. We are talking about the adults of tomorrow who would be better prepared. And again, I repeat, it is timely. It could not be more timely, because we have a crisis in education.

If we can implement this legislation in a satisfactory fashion, I say satisfactory because I am not so sanguine about all of its contents, and I am sure Chairman Wirth would be willing to accommodate it, and be flexible in the matter. It is the opening salvo, and our experience with legislation is that when we have responsible input, reasonable, intelligent input, there are often amendments that will produce the kind of product that we will find the industry supporting.

I think that is doable, and it should be a universal response to the problem, so that in the end it is not as controversial as it seems to be at this point, and it is the testimony from gentlemen like yourself that will be instrumental in bringing about that desired end. Thank you, Mr. Chairman. Thank you, gentlemen.

Mr. PERKINS. Mr. Wirth, anything else?

Mr. WIRTH. Just related to the doctors that were being discussed by you and Mr. Nielson and Mr. Pfister. We had had dramatic changes in 1981 both in the authorization and in the appropriation level for public broadcasting. The authorization level was moved from $220 million to $130 million.

That was the authorization. We know that that can be "funny" money, so it is important, as you pointed out, to look at the appropriations. The appropriations dropped from $172 million to $130 million. So both from the authorization level and, most importantly, in the appropriations level, the Corporation for Public Broadcasting took a major whack. I think it is a 40-percent decrease in automation and a 26- or 27-percent decline in appropriations. We have not asked other programs to take that kind of very, very dramatic cut.

In addition to that, we said making that change and making that cut, we would like to explore all other alternatives of funding, so, as Mr. Pfister pointed out, we set up TCAF, the Temporary Commission on Alternative Financing. This was a commission of experts on the outside, public broadcasters, private business people, and two Members of Congress, Congressman Swift and Congressman Tauke. Their report came back to us in October, I believe.

Mr. PFISTER. The final report was just delivered at the beginning of this week.

Mr. WIRTH. It just came back. It is not very encouraging about all the hopes we had to raise additional funds from the outside. Knowing that was the case, we came back and said, well, we have to address this legislatively. That is why we have asked for an increase focused on the cost of living above the $130 million level because of those dramatic cuts.

We do not see that there are very real alternatives to funding public broadcasting. Thus we came back with a request focused on the cost of the inflation index above $130 million, and is the issue we are dealing with in the FCC authorization which we hope to have on the floor in the next 3 weeks. We are not playing games with numbers at all. There has been a very dramatic and real cut in public broadcasting.

Mr. Chairman, I want to thank you very much, and the Committee on Education and Labor, for your generosity, time, interest, and commitment in a joint task that perhaps again, was best summed

up by Dr. Baker and supplemented by almost all of our other witnesses today.

Gentlemen, we thank you for being with us, and look forward to working with you. Thank you very much.

Mr. PERKINS. I likewise thank all of you, ladies and gentlemen. You have been most helpful. The joint committee will now adjourn.

[Whereupon, at 12:30 p.m., the joint committee was adjourned.]

[The following materials were received for the record:]

On the Public Broadcasting Service

Co-produced by GPN/Nebraska ETV Network and WNED-TV, Buffalo, New York, in association with Lancit Media Productions, New York, New York.

Funding for this series is made possible by the Corporation for Public Broadcasting and Kellogg Company.

READING RAINBOW

October 4, 1983

The Honorable Carl D. Perkins
Chairman
Subcommittee on Elementary Secondary
Vocational Education
Committee on Education and Labor
U. S. House of Representatives
Washington, D.C. 20515

The Honorable Timothy E. Wirth
Chairman
Subcommittee on Telecommunications
Consumer Protection and Finance
Committee on Energy and Commerce
U. S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairmen:

Only my part in a Los Angeles play prevented me from accepting your invitation to speak with you. In all of television there is nothing more important than the issue of quality educational television programming for children.

For two years, I have had the good fortune to be a part of a public television effort, Reading Rainbow. Our goal was simple but unprecedented - to use the best television to motivate beginning readers to read during the summer and, by so doing, to retain those reading skills they struggled to achieve during the school year.

Were we successful? You bet we were. In our first week, over 5 million young children watched Reading Rainbow and they were motivated by what they saw. Librarians reported that children were talking about the series when they came into the library. Not only did children ask for books by titles, but

7449 Melrose Avenue, Los Angeles, CA 90046 – (213) 655-8973 441 Lexington Avenue, New York, NY 10017 – (212) 557-8400

they also asked for other books by the same authors. One librarian was startled to learn that only four copies of the entire 67 books identified in the series were not then checked out. Other librarians reported similar experiences.

Parents, teachers and children wrote us. One New Hampshire mother was relieved to learn the series would be availabe in Maryland, since her young daughter refused to go on vacation if it meant missing Reading Rainbow. Publishers reported record sales of children's books - some up as much as 80% - a fact they attributed to Reading Rainbow.

What does this really mean? To me it underscores that we have the talent to harness the power of television as a constructive tool for learning - both in and out of school. The expertise to create good programming is there. What we need are the financial resources to allow talented people to get about the task. Many talk about children, but few seem willing to support quality children's television. With the help of the Corporation for Public Broadcasting and the Kellogg Corporation, we have been successful in getting 15 Reading Rainbow programs on the air. Based on the status of current negotiations, we plan to have five new programs next summer, but even more are needed.

I will strive for the time when all children's programs will be of such a high caliber that as parents we can be at ease with the knowledge that viewing television contributes to the development and growth of our children.

I welcome you as partners in achieving this goal.

Many thanks for your time and your interest in this vital area.

Sincerely,

LeVar Burton

/ap

BANK STREET COLLEGE

Bank Street College of Education/610 West 112th Street/New York, NY 10025 (212) 663-72(

PROJECT IN SCIENCE AND MATHEMATICS EDUCATION

October 4, 1983

Charlotte Wilson
Hearing Coordinator
B331, Rayburn HOB
Washington DC 20515

Dear Miss Wilson:

In light of the recommendations of the recent NSF report on science and mathematics, the enclosed description of Bank Street College's Project in Science and Mathematics Education may be of interest to the Subcommittee on Telecommunications and Finance as it hears testimony regarding the role of children's television in vital areas of education.

Initial funding for the Project was through a contract awarded to Bank Street by the U.S. Department of Education in 1981. When our contract with the Department of Education ends in the fall of 1984, we will have produced 26 quarter-hours of television programming for children, several types of innovative microcomputer software for use in schools, accompanying print materials for classrooms, and a prototype videodisc.

The television show in particular may be of interest to the Subcommittee. It was referred to, though not named, in the recent TV Guide article by Vance Packard. (The relevant section is enclosed.)

The series, entitled "The Voyage of the Mimi," combines 13 quarter-hours of drama/adventure and 13 quarter-hours of documentary to provide upper-elementary-age children with a unique combination that is exciting, entertaining, and informative.

Of further interest is our unique partnership with CBS, Inc., whose Publishing Group, under the auspices of Holt, Rinehart and Winston, will publish and distribute the microcomputer and print materials to schools beginning in the fall of 1984.

I hope this information is useful to the Subcommittee.

Sincerely,

Samuel Y. Gibbon, Jr.

Samuel Y. Gibbon
Executive Director

BANK STREET COLLEGE

Bank Street College of Education/610 West 112th Street/New York, NY 10025 (212) 663-7200

PROJECT IN SCIENCE AND MATHEMATICS EDUCATION

In 1981, Bank Street College was awarded a contract by the Department of Education to develop a television series concerning mathematics and science education. The Bank Street Project in Science and Mathematics Education was designed with two broad purposes in mind: to improve instruction in these areas for children in grades four to six and to make computer and video technology useful in the classroom. The core of the project is a 26-episode television series in two parts: 13 quarter-hours of drama/adventure about the experiences of two young scientists and their teenage research assistants while on a seagoing expedition to track and study humpback whales; and 13 quarter-hours in a documentary format designed to explore and expand the scientific, technological, and mathematical content of the drama. Each segment in the series, Voyage of the Mimi, introduces scientific and mathematical content in a way that arouses children's interest and, we hope, gives them a sympathetic and accurate picture of scientists at work. The executive director of PSME is Samuel Y. Gibbon, Jr., Emmy award-winning producer of Sesame Street and The Electric Company and most recently a consultant to 3-2-1 Contact, the elementary science series of the Children's Television Workshop. Voyage of the Mimi is scheduled to be aired on PBS in the Fall of 1984 with underwriting from CBS, Inc.

Microcomputer and print materials that relate to the show include:

- Four pieces of computer software: Rescue Misson, a navigation simulation; Probe, a tool to gather and display data from the physical world using the computer; and two games to introduce children to programming in the Logo language, Whale Search and Treasure Hunt;
- Teachers' manuals;
- Student workbooks that can be used in classrooms that do or do not have computers.

To date, PSME has concluded the development and field testing of two pilot episodes of the television series as well as prototype microcomputer software and print materials. Reactions have been decidedly positive concerning all materials. Our formative research and field testing suggests that the content and format of the TV series holds the attention of children and transmits useful and accurate information about science and math concepts as well as contemporary technologies. Filming of the dramatic episodes of the television series is nearly completed, documentary filming will begin in September 1983, and software and print materials are being revised and expanded. By September 1984, PSME will have developed two more games for Logo instruction and another simulation concerning interaction in a closed ecosystem. Negotiations are presently underway with Holt, Ronehart and Winston, a subsidiary of CBS, Inc. for the publication and distribution of classroom print materials and software. The additional funds to be invested in the project by CBS will permit a significant enlargement of the scope of the materials and will ensure that they receive the widest possible dissemination.

BANK STREET COLLEGE OF EDUCATION
Project in Science and Mathematics Education

Science and mathematics education, particularly at the elementary level, faces its most serious challenge since the 1950s. The enormous post-Sputnik push to bolster science and math education, with its resultant plethora of curricula and programs, lost its momentum and support in the late 1960s in the face of social upheaval on an extraordinary scale. Education, a most indicative barometer of societal climate, demonstrated amply the perceived conflict between human and scientific progress. Twenty years later, with most educational indicators reporting a bleak picture of student achievement, we have come to recognize that social and scientific growth may not be mutually exclusive. But how is a nation of scientifically and mathematically ill-informed citizens to be attended to after two decades of neglect?

The consequences of this neglect abound. While verbal scores on standardized tests have improved for the first time in years, scores on the math section of the SAT have dropped from a mean of 502 in 1963 to 466 in 1980. The number of science courses taken by high school students has also dropped in recent years, a trend that shows no signs of abating (NSF/DE, 1980). Concerning elementary grades, a recent convocation of the National Academies of Sciences and Engineering (1980) reported that by the end of third grade almost half of all American children display an active dislike for science and indicate that they would not like to take any further science classes. This percentage increases as the grade level rises. With regard to mathematics, a wealth of information exists documenting the "fourth grade slump" particularly among females (Hilton and Berglund, 1974).

Although it is still unclear how educators will respond to the challenges posed by the current state of science and math education, it is clearly an issue of national importance. As President Reagan noted, "The problems today in elementary and secondary school science and mathematics education are serious--serious enough to compromise America's future ability to develop and advance our industrial base to compete in international marketplaces. Failure to remain in the industrial forefront results in direct harm to our American economy and standard of living."

While the future of science and math education is not clear, its present state is more certain. Teachers are less qualified to teach science and have greater commitments to other curriculum areas (Gerlovich & Downs, 1980). During the five classroom hours available in each school day, elementary grade teachers devote on the average only 45 minutes to mathematics and 20 minutes to science (Horn and James, 1981). Back-to-basics advocates urge a rote approach to the "3Rs" (which do not include science) and place a priority on memorization of facts and technical terms. As Dr. Frank Press, President of the National Academy of Sciences, asserts, "Science may have become astronomy without the stars...botany without the flowers...geology without the mountains and the valleys."

TV GUIDE
(August 20-26, 1983)

MEMO TO PARENTS

DON'T LET TV DESTROY OUR CHILDREN

A noted social critic offers his plan for getting the most from what he believes is a potentially damaging medium

By Vance Packard

COMMENTARY

Recently television has made it a lot tougher to be a good parent. There are several reasons. For one thing, there is recent evidence that heavy TV watching affects early-personality formation. Then there is the seemingly low sense of responsibility of many broadcasters. And finally there are the problem-raising new forms in which TV programming comes—cable TV, pay-TV and videocassettes—that make television more pervasive than ever before. Guiding children's viewing habits has become immensely more challenging. Many parents have given up.

If I were raising a child today I would be a lot tougher about what he (or she) watched than 90 per cent of today's parents probably are. I say this because I have spent the last five years studying the changing world of children.

Television is a major part of that changing world. I think that the sheer amount of time children spend watching TV programs is a national scandal. They spend about as many hours a year in front of the tube as they spend in front of teachers in classrooms. And preschoolers spend even more time with the TV set.

Young kids going to school should be getting 10 or 11 hours of sleep at night, which means they should be in bed by 9 at the latest. Yet Nielsen studies show that nearly a quarter of all grade-school children—more than 10 million of them—are still watching the tube between 10 and 11 o'clock at night. And about a million children are still watching after midnight. If there is a cable set in the house and the folks are out, they could be catching R-rated shows, which they shouldn't. (If they own a video recorder, they might even be watching X-rated cassettes.)

If I were a parent today, I wouldn't let any of my kids under 15 have a TV set in their room—and not just because of the R-rated material. Having a TV set so readily available simply puts too much pressure on kids to become heavy, indiscriminate TV viewers. Whether the set is in their room or not, if they are heavy, unsupervised viewers, studies show that subtle damage may be done to their emerging personalities.

Don't get me wrong. I'm not a scrooge who would put the TV set in the attic—unless I found myself with a really out-of-control situation. There is much on TV that can delight young viewers, provided they are given proper guidance. But if I were a parent today, I would be very, very uneasy if my children had heavy, unsupervised access to the television set. For instance:

I would wonder whether TV was turning my children into materialistic cynics.

The typical U.S. youngster finishing high school has, in growing up, been the target of more than 1500 hours of commercials on TV. This selling barrage does more than influence children's brand preferences. It helps shape their concept of what life is all about—and it's a highly materialistic view that they get.

Much of the advertising aimed at children is designed to make them effective naggers. An adman was quoted in Advertising Age, advising: "If you truly want big sales, you will use the child as your assistant salesman. He sells, he nags, until he breaks down the resistance of his mother or father."

Kids are uniquely vulnerable to the verbal curves tossed at them by TV pitchmen. The younger listeners are close to total believers in what adults tell them. Eventually (by age 7 to 10, according to a report printed in the Harvard Business Review) children are bothered by misleading or exaggerated ad messages. It is then that they begin to suffer from disillusionment. Such disillusioned youngsters may become wary of accepting the word of adults in general.

By the time youngsters reach age 11 or 12, the Harvard Business Review report says, kids have become cool cynics. Their views of morality, society and business may be distorted. In other words, by allowing our children to watch TV indiscriminately, we may be conditioning them to accept hypocrisy. →

Vance Packard's latest book, "Our Endangered Children," will be published this month.

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If I were a parent, I would also be wondering whether heavy, indiscriminate viewing was making my children passive and undermining their imagination.

A recent U.S. Government publication about child raising printed a scary essay called "The Electronic Fix." It cited two similarities in effect between drug taking and heavy TV viewing: both blot out the real world and promote passive states.

In general, studies show heavy viewers don't do as well on national test scores. Is it because their viewing causes them to go easy on homework? Is it because their viewing limits their reading for pleasure (and thus their literacy)? TV viewing over long stretches is not nearly as challenging mentally as reading or working with materials.

Younger preschoolers also play less if they are heavy viewers—and that is bad. Play, we are learning, is very important for the growing child. The fantasies we create while playing help stretch our imaginations (and ease our anxieties). Interacting with playmates not only helps improve our verbal skills, but also teaches us how to have arguments and still be friends. I'd hate to have kids without those talents.

If my children showed frequent signs of being restless or tired, I would begin to wonder whether heavy TV viewing was responsible.

The flickering screen mostly gives a swirling view of the world. On *Hill Street Blues*, a great favorite of teen-agers, the swirling seems a deliberate way of stirring up tension and excitement. Rarely do the various cameras zooming up and jumping back stay on one character for very long. Even the esteemed children's show *Sesame Street* tends to leap every few minutes to new subject matter. On commercial TV, sales pitches come in 15- 30- and 60-second bursts. And nightly-news interviews are long if they last one-and-a-half to two minutes.

Is the heavy-viewing child more prone to be hyperactive or to have a short attention span? Some experts are worried that he is. The whirl of scenes can also fire the mind, at least for younger children.

T. Berry Brazelton, the Harvard pediatrician, has observed that children under 5 show signs of exhaustion if exposed to more than one hour of television a day.

I would also be wondering whether heavy, indiscriminate viewing was making my children distrustful.

There are studies that indicate that heavy exposure to all the plotting, hoodwinking and manmanding depicted on TV may be undermining the very important sense of trust that a well-reared child learns in the arms of his loving parents.

Youngsters who are heavy TV viewers are twice as likely to say they are "scared" about going outside their home, according to the Foundation for Child Development. And a study that the American Medical Association helped sponsor found a real worrier: People who spend the most time watching TV (and thus more time watching crime programs) are far more likely to buy locks, dogs and guns. Worse, they tend to have low faith in people. I'd feel awful if my kids grew up like that.

And I would be wondering whether my children were more likely to become vulgar, callous or promiscuous at an early age because of exposure to R-rated or pornographic material.

I'd keep my children under 15 away from The Playboy Channel. In fact, I would insist on full supervision of anything that my children under 12 saw on pay-TV, where program standards are looser.

If I found that television had become a major influence in my children's lives, I would treat it as a major area of concern. I'd make damned sure their viewing was a life-enhancing force, not an insidious one. All parents should.

How would I do this? As much as possible I would guide my youngsters away from shows likely to generate distrustfulness or emotional upset, or shows that make buffoons or bunglers of law-enforcement agents. I'd make sure they had low exposure to programs larded with ads specifically geared to seduce kids, as is the case with most of the Saturday-morning shows. I might allow my kids to budget one half-hour Saturday-morning show a week, just so that they could seem up-to-date with their cartoon-addicted classmates.

Every weekend I would go through a program guide with my children and we would check shows that might prove interesting and rewarding. I would be looking particularly for:

☐ Shows that would give my children a sense of participation in life. For example, there's a program now in production for PBS that will show teen-agers at sea, helping young scientists study whales. The lack of thoughtful shows for this age group is where television has failed the most.

☐ Shows involving exploration or experiments. It is good news that Mr. Wizard, who uses everyday objects to help youngsters understand science, is being brought back by Nickelodeon.

☐ Shows that promise to stimulate the imagination. The Disney, "Charlie Brown" and Muppet people often accomplish this with thoughtfulness. And their shows (for instance, Jim Henson's *Fraggle Rock* on HBO and the new Disney Channel on pay-TV) tend to be delightful.

☐ Shows in which adults and kids are shown doing things together. (The recently canceled *Little House: A New Beginning* was a fine program that stressed family togetherness. My 7-year-old grandchild, Amanda, will miss it.) A disturbing trend of our times has been the growing isolation of youngsters from adults.

☐ Shows that promote thoughtfulness, either about the special problems of growing up or about conditions in the world. For example, I have been much impressed with *CBS News Sunday Morning*. In general, today's news programs give young viewers a better understanding of the world than I ever had at their age.

Once I had reviewed the week's possibilities with my children, I would help them draw up a viewing schedule. This is where I'd wipe out the heavy viewing, which is by far the main problem. If my kids were school age and under 14, I would let them choose up to 10 hours of programming from the list we had agreed upon. (Preschoolers could have seven hours—one hour a day—if they wished.)

The 10-hour maximum would be spread throughout the week like this: one hour, at most, on Monday through Thursday; and two hours a day, if desired, on Friday, Saturday and Sunday. (If your young one especially wants to watch a two-hour show on a school night, he should agree to skip TV the next night. Or better still, if you have a video recorder, you could tape the two-hour show for weekend viewing.)

I would work hard to develop a relationship of trust with my kids, and win their agreement that rules should be respected. (This is especially important where both parents work, or where there is a single parent who works, and the child is in the house alone a lot.) I would work hard to see that they had plenty of things to do besides homework and TV viewing.

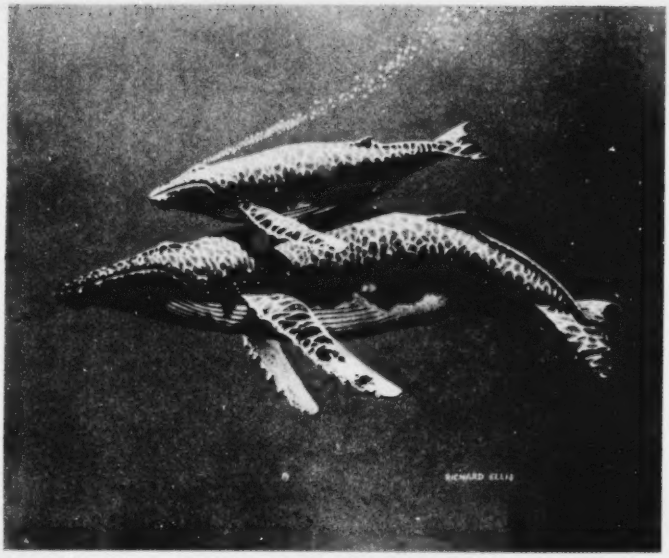
If home size permitted, I would put the TV set somewhere other than in the living room—perhaps in the master bedroom, a study or a basement room. I would have earplugs so that my TV viewing doesn't disturb their reading or play, and their viewing doesn't disturb mine.

At an early age, say by 4, my kids would know that commercials are definitely different from regular programming. I would explain the selling purpose of ads. We'd talk about any overstatement or slickness. My kids would become very good spotters of phony claims.

They would also understand that the lying or deliberate injury of another person is a terrible thing. I would express anger when the good-guy cops on crime shows treat such matters without compassion.

And I would try to set a model for adulthood. Kids are tremendously influenced by the way their own folks behave. If I were a parent with young children today, I wouldn't slouch hour after hour at night in front of the tube. I would have rules about my own TV viewing. I would spend my spare time reading, fixing up the house, working at a hobby, being a good citizen, helping in some way to make my community a better place—and most of all, playing with my kids.

Bank Street Reporting
Special Issue



Humpback whale and calf by marine illustrator Richard Ellis from "The Book of Whales" (Alfred A. Knopf).

CONVEYING THE EXCITEMENT OF SCIENCE

Project in Science and Mathematics Education

Eleven-year-old C.T. Granville sits on the foredeck of the ketch "Mimi," alone and quiet in the darkness during his first night at sea. Suddenly the sound of an enormous creature breathing emerges from the water. The young boy is terrified.

"Now this is scary and interesting," says Sam Gibbon, executive director of a Bank Street television series on science and mathematics for children. "Here's a kid from a farm in Ohio, feeling lost and lonely, miles at sea. And here's a huge creature, in the ocean next to the boat, taking a breath. From this one moment can be drawn an enormous amount of science and math."

As it happens, the sea creature is a whale — a rich resource for teaching and learning. The study of whales and their environment leads naturally to issues such as biological adaptation and survival, the food chain, and the interdependence of species. Similarly, because much of the series takes place on a boat, questions about the mechanisms of buoyancy and about methods of navigation arise. Combined, these story elements give rise to underlying questions about principles of physics, mathematics, geometry, and astronomy. As the crew navigates the ship, locates whales and their feeding grounds, and records data, there are many opportunities to illustrate techniques of measurement, mapping, graphical representation, and the use of computers.

Bank Street's Project in Science and Mathematics Education is creating the television series through a $2.65 million contract with the U.S. Department of Education. Twenty-six 15-minute episodes will be presented in the form of an adventure story about two scientists and a group of teenagers on a whale research expedition (see *Storyline and Cast of Characters on page 3)*. The story will stand on its own as a drama and may also be used with supplementary classroom materials. Both the television series and supplementary materials will exploit the educational potential of new communication technologies.

Bank Street has outlined an ambitious set of goals for the project. • To enhance children's understanding of science, mathematics and technology. • To help children master principles of the scientific method which they can apply to their own investigations. • To help children recognize how

Meet the Director . . .

Samuel Y. Gibbon, Jr., director of the Project in Science and Math Education, has a distinguished background in Children's television and the academic world. He began his career with CBS in 1952 and was associate producer and writer for "Captain Kangaroo" for seven years. He has been associated with the Children's Television Workshop since 1968 — as producer of "Sesame Street," executive producer of "The Electric Company," and executive director for the developmental phase of "3-2-1 Contact," the CTW series on science, technology and the environment for 8 to 12 year olds.

Gibbon received his A.B. in English Literature from Princeton University in 1951. He won two National Academy of Television Arts and Sciences' Emmy Awards — as producer of "Sesame Street" in 1970 and executive producer of "The Electric Company" in 1977. Gibbon's publications include "Sesame Street Time, The Electric Company and Reading" in the volume Toward a Literate Society: A Report from the National Academy of Education (McGraw-Hill).

Curriculum Goals

The television series will present a chunk of the real world, rich with information about whales, ships, the sea, marine science, and techniques of survival on land. The curriculum is organized around three sets of concepts and principles intended to give order and coherence to these facts.

- **Substantive concepts.** The physical and life sciences are usually taught as separate disciplines. Bank Street will prevent scientific concepts and principles as an integrated web of knowledge linked naturally and directly to the phenomena observed in the television series. We have chosen as an embracing concept the notion that the earth is a vast ecosystem made up of subsystems. Within this master concept, we will explore both biological principles having to do with adaptation and survival and physical principles having to do with matter and energy as they apply to nonliving as well as living systems.
- **Scientific method.** Our aim is to orient children toward rational and empirical inquiry. We want them to attack concrete problems by using the scientific methods of observation, interpretation, hypothesis creating and testing and the ill-defined but essential role of hunches, tinkering, and learning from failures. We will emphasize the role of technology in the scientific enterprise.
- **Mathematics and measurement.** These are important tools that enable scientists to collect and summarize data and to express concepts clearly and precisely. Among the specific principles in this set are (a) numerical representation of physical phenomena, (b) graphical representation of numerical data, (c) graphical representation of two-variable relationships, (d) map construction and interpretation, and (e) some elementary statistical ideas such as averaging and sampling.

science and technology can be used to solve problems they encounter. • To help children understand what scientists do and consider careers in science and technology for themselves. • To foster an interest in science among boys and girls from all backgrounds. • To provide teachers with a model of how to integrate the microcomputer with the classroom curriculum, particularly in science and mathematics, and • To provide kids fans with a new model of science and mathematics education, incorporating new technology as both content and process.

"In developing the curriculum and storyline, we have sharpened our definitions of these goals and begun to distinguish among goals that can be achieved through the TV series itself and those that are best achieved through activities in the classroom or home with the series acting as a catalyst," Gibbon explains. "The series will convey facts about whales, ships, the sea, and techniques of survival on land. It will present models of scientific thinking and show various technologies in use, including computers. These can be incorporated directly into the TV segments and, according to research evidence, absorbed and retained by child viewers."

Two packages of supplementary materials will be available with the TV series, one for classrooms with computers and another for classrooms without. The suite are developed for classrooms with computers will help students learn some of the many ways in which computers can be used — for experiments, simulations, data collection, analysis, and graphing as well as puzzles and games. Three types of microcomputer software and four programs have been written for the project during the first year. "Rescue Mission" was developed under subcontract by Computer Learning Connection, Inc. It illustrates the computer's simulation capabilities through an exciting game format. Children apply basic navigation concepts and principles and use simulated navigation equipment as they move ships toward their objective of reaching a whale trapped in the net of a fishing trawler. "Probe," developed by Technical Education Research Centers, Inc., converts the Apple computer to a laboratory instrument for collecting and displaying data from the physical environment. "Probe" activities allow children to experiment with and learn about physical phenomena, for example, temperature, while introducing the conventions for constructing and interpreting graphs. "Whale Watch" and "Treasure Hunt" are two programs created in Bank Street's Center for Children and Technology by Barbara Dubitsky, coordinator of classroom materials for the project. These game-like activities are written in Logo, a powerful, higher-level art Logo designed especially

Photographs, clockwise from upper left: (1) Kitty Marsh, director of "The Voyage of the Mimi," and Sara Colston, executive producer, look at one of the early drawing boards of pilot episodes; (2) during location shooting in Martha's Vineyard, Jim Gibbon at the Bank Street-built work station with microcomputer, software developed for the project, and members of the cast of the film set for what's aboard the Mimi. (Photographs by Jim Hamilton, Barbara Rice)

The Storyline

Three teenagers join two young scientists from the Noyes Institute of Ocean Research (a fictional amalgam of several actual research institutions) as student assistants on a seafaring scientific expedition tracking and studying humpback whales. The institute has chartered a boat called the "Mimi" and the skipper has, somewhat reluctantly, taken his 11-year-old grandson for the voyage. So there are a captain and crew of six when they set sail.

The pilot has 26 15-minute episodes, some centering on problems directly related to the scientific mission and some on the unplanned adventures that result when "Mimi" is damaged in a heavy storm and must be beached for emergency repairs. The episodes have been grouped into 13 pairs allowing for public service commercial broadcast as a series of half hours in most of the pairs. The first episode will end in a cliffhanger confronting the characters and viewers with a problem that is to be resolved in the second episode. For some of these, supplementary materials can be used in the classroom after the first episode of each such pair to allow children to try their own hands at solving the problem confronting the characters — for example, figuring out the position of the boat when it is lost at sea.

Cast of Characters

Clement Cromville: Jack of all trades and master of many, Cranny is owner and captain of the ketch "Mimi," named for his late, beloved wife. A crusty, charmer, before Cranny's basic warmth. As the story develops, Cranny grows closer to his grandson and forms a bond with the teenager, Rachel.

Anne Abrams: Brains, attractive oceanographer and research fellow at Noyes. Anne is adept at deflating an overblown ego or a tense moment with a gentle joke. A fascination with computers, and talent with watercolors lead Anne to create beautiful computer graphics. She is a mentor for Arthur and develops a close relationship to Sally Ruth, who teases her to sigh.

Ramon Rios: Young marine biology Ph.D. and Noyes research associate. Ramon is at once set behind the stars and wise beyond his years. Born in a tiny Puerto Rican fishing village, marine biology is his path back to the sea. Ramon is confused by the feelings toward Anne and cheerfully obliv-ious to Rachel's crush on him.

Sally Ruth Cochran: A student at College of the Atlantic, Sally Ruth has a special interest in whale songs through her two obsessions — scuba diving and communications. Deaf from an early age, she lap reads and signs perfectly. Definitely a survivor, Sally Ruth embodies the qualities of strength and gentleness, confidence and sensitivity.

Rachel Fairbanks: Rachel, like many adolescents, is really two people. Both are fit, white, Connecticut suburban and accomplished sailors. One has come so late and reject many of the traits she sees in — but shares with — her parents. The other is helpful and engaging. Through sailing, a special relationship develops between Cranny and the "new" Rachel.

Arthur Spencer: A 10-year-old black kid from a large middle-class family of achievers. Arthur is an honor student and electronics wizard. His favorite diversion is electronic games, and his friends call him "Video" or "Mr. Screen." A mutual interest in computers fosters close ties with Anne. Arthur helps Rachel see her two "selves."

Clement Tyler "C.T." Cromville: At home on the farm in Cities, C.T. is responsible, inventive, enthusiastic and funny. Aboard the "Mimi" he feels misplaced, even rejected, at first. On the island, C.T. begins to reveal his life skills. He brings to science the 11-year-old's "how-come" and "gee-whizzes" that teenagers often cannot bring themselves to express. The development of his relationship with his grandfather is a central theme.

for easy access by children. Logo has outstanding graphic capabilities, leads children to an understanding of basic geometric concepts, and can provide an understanding of and introduction to programming. For classrooms without computers, the package will include (a) activities that parallel those the children do on computers, (b) guides to math and problem-solving skills, (c) written materials—charts, graphs, and student worksheets, (d) notes to teachers, and (e) a cross-reference of subject matter and index to classroom materials.

Explicit teaching is possible within the TV series to the extent that it is natural for the scientists to teach the student members of the crew. Classroom activities and microcomputer exercises will extend many additional ideas that are implicit in the series itself. They will also give children opportunities to manipulate materials and apply principles in concrete fashion.

Teaching by example is particularly important in the case of the project goals that have to do with children's attitudes toward science and appreciation of its human uses. "We hope that the TV series can communicate the idea that science is an exciting and rewarding human enterprise which is not the exclusive province of white males," says Gibbon. "We hope it can show how science and technology contribute to each other — while raising issues about the consequences of applying science and technology and about the responsibilities of both scientists and the public. Our strategy is to try to create these attitudes and sensitivities, not through explicit teaching or preaching, but through the development and interplay of characters in the TV series."

Research has both informed early decisions about project design and provided ongoing feedback for ongoing refinement of the various elements as they are developed. Under the direction of Karen Sheingold of the Center for Children and Technology, the research staff has conducted formative research and designed and conducted field tests with classroom teachers and students. Testing sites during the first year included New York City and Scarsdale, New York, as well as sites in New Jersey and Michigan. Information provided by such research is a central consideration in designing and developing the final project deliverables.

The Project in Science/Mathematics Education is a collaborative venture under Gibbon's overall direction. Microcomputer applications for the classroom are being developed by Bank Street's Center for Children and Technology and two Cambridge-based firms — Computer Learning Connection, Inc. and Technical Education Research Centers. Television production is being undertaken by Peace River Films, Inc., also based in Cambridge.

Bank Street personnel include: Lorin Driggs, special assistant to Sam Gibbon; Karen Sheingold, deputy director for evaluation; Barbara Dubitsky, coordinator of classroom materials; Jan Hawkins and Cindy Char, evaluation specialists; Tom Roberts, assistant evaluation specialist; Mary Fitzpatrick, content researcher; and Philip Miller, technical writer/researcher. In addition, two consultants are serving key functions: Richard Hendrick, head writer (scripts), and Jeff Travers, coordinator of curriculum development. ■

More information about Bank Street . . .

Bank Street College, founded in 1916 as the Bureau of Educational Experiments, is a leader in early childhood education and a pioneer in improving the quality of education for children and youth. We at Bank Street perform three interrelated activities — teaching, research, and community service — through a Graduate School of Education, demonstration model School for Children, Research Division, School and Community Services Division, and Publications Group.

The **Project in Science and Mathematics Education** is part of the Research Division but also includes personnel from other divisions of the College as well as interdisciplinary specialists from outside. Indeed, this is a hallmark of the Bank Street approach to education: the bringing together of people from different backgrounds to integrate and weave their professional training, skills, and experiences in an effort to find solutions to the educational problems of our complex society.

Among Bank Street's other programs and projects in science and mathematics education:

- **Center for Children and Technology.** Doing research on (a) how electronic technology, such as the microcomputer, may influence children's learning and (b) acquiring research-based knowledge on how to use technology to the developmental and educational advantage of children. Center staff teach the course "Microcomputers in the Classroom: Practice and Theory" in the **Graduate School of Education** and "Microcomputers: An Introduction through the LOGO Language" through the **New Perspectives** series of one-credit and two-credit summer or weekend graduate courses. The Center also offers computer workshops on classroom uses of microcomputers. (For technical information and to arrange workshops, call Barbara Dubitsky at (212) 663-7200 extension 389.)
- **Expanded Programs.** From the Bank Street Graduate School of Education, providing inservice training for teachers — at the teachers' own work site — via course work, seminars, and consultation in areas such as curriculum development and evaluation. Among the courses offered is "Mathematics for Teachers."
- **Tiorati Workshop for Environmental Learning.** At Harriman State Park, providing training in environmental education for teachers from inner city and suburban schools. "Interrelated Science Workshop in the Urban Environment" is a city-based version of the Tiorati Workshop course. It helps city school teachers integrate science with other areas of the curriculum.

Bank Street College is located on the Upper West Side of Manhattan. Our neighbors include the Cathedral of St. John the Divine, Goddard Space Flight Center, Columbia University, Barnard College, and the Manhattan School of Music. We are ten minutes by public transportation from Lincoln Center for the Performing Arts and twelve minutes across Central Park to Fifth Avenue and New York City's Museum Mile.

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